

August 31, 1989

1989-90

Brandeis University
Bulletin

Graduate
School of Arts
and Sciences

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Brandeis University
Libraries



Brandeis University
National
Women's Committee

1989-90

Brandeis University
Waltham, Massachusetts

Graduate School of
Arts and Sciences

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Section 2B of Chapter 151C of the Massachusetts General Laws provides that: "Any student [...] who is unable, because of his religious beliefs, to attend classes or to participate in any examination, study, or work requirements on a particular day shall be [so] excused..., and shall be provided with an opportunity to make up such examination, study, or work requirement which he may have missed because of such absence on any particular day; provided, however, that such makeup examination or work shall not create an unreasonable burden upon such school. No fees of any kind shall be charged ... for making available to the said student such opportunity. No adverse or prejudicial effects shall result to any student because of his availing himself of the provisions of this section."

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It is the policy of Brandeis University not to discriminate against any applicant on the basis of race, color, religion, sex, sexual or affectional preference, age, national origin, veteran or disability status. The University operates under an affirmative action plan and encourages minorities and women to apply, both in terms of employment and to all the rights, privileges, programs and activities generally accorded or made available to its students. Inquiries concerning discrimination may be referred to the Assistant to the President for Affirmative Action, Gryzmish Building, Brandeis University and/or to the Director, Office for Civil Rights, U.S. Department of Education, Washington, D.C.

Programs, requirements, fees and other information are set forth herein as they exist at the date of this publication. Brandeis University reserves the right to make changes without notice.

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Academic Calendar 1989-1990

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Fall Term			Tuesday through Tuesday	December 12 December 19	Examination period. Winter Recess begins after last examination.
Tuesday	August 29	Returning students register. Fees are payable in full at this time. Students who register later will be fined \$10.	Tuesday	January 2, 1990	Fall Term grades due and Incompletes from Spring Term 1989. Final day for faculty certification that February master's candidates have completed degree requirements, including language(s) and theses, and that Ph.D. candidates have defended dissertations. Final day for February degree candidates to discharge any financial indebtedness to the University.
Wednesday	August 30	New students register. Fees are payable in full at this time. Students who register later will be fined \$10.			
Thursday	August 31	Opening day of instruction in courses.			
Monday	September 4	No University Exercises.			
Friday	September 15	Final day for filing Study Cards. No program changes for Fall Term may be made after this date.	Friday	January 5	Final day for admission to candidacy and for completion of language requirements for students expecting to earn the Ph.D. in May 1990. Final day for February doctoral candidates to deposit dissertations at the Graduate School Office.
Monday	October 9	No University Exercises.			
Friday	November 10	No University Exercises.			
Tuesday	November 21	Brandeis Friday. Friday class schedule in effect.			
Wednesday	November 22	Brandeis Monday. Monday class schedule in effect.			
Thursday and Friday	November 23 and November 24	No University Exercises.	Friday	January 12	Registration for students entering in Spring Term. Registration procedures begin for returning students.
Friday	December 1	Last day for February degree candidates to submit penultimate copies of dissertations to department chairs and to file Application for Degree with Graduate School Office.	Monday	January 15	No University Exercises.
Thursday	December 7	Last day of instruction.	Tuesday	January 16	First day of instruction in courses.
Friday through Monday	December 8 December 11	Study days.	Tuesday	January 30	Last day for filing Study Cards. No program changes may be made after this day.
			Thursday	March 1	Final day for filing Application for Financial Aid for 1990-91.

Spring Term

Monday through Friday	March 5 March 9	Midterm Recess.	Tuesday	May 1	Last day of instruction.
Monday	March 12	Last day for May degree candidates to submit penultimate copies of dissertations to department chairs and to file Application for Degree with Graduate School Office.	Wednesday	May 2	Study day.
			Thursday through Thursday	May 3 May 10	Final examination period.
			Monday	May 7	Final date for May doctoral degree candidates to deposit dissertations at the Graduate School Office.
Monday	April 2	Final day for master's candidates to complete foreign language requirement(s) for May degree. Final day for completion of language requirements for students expecting to earn the Ph.D. in February 1991.	Monday	May 14	Grades due for all degree candidates no later than 10:00 a.m. Final day for faculty certification that master's candidates theses have been accepted.
Tuesday through Tuesday	April 10 April 17	Spring Recess.	Sunday	May 20	Commencement.
Wednesday	April 19	Final day for faculty certification that May Ph.D. candidates have defended dissertations. Final day for May degree candidates to discharge any financial indebtedness to the University.	Tuesday	May 22	All Spring Term grades due and Incompletes from Fall Term.

Major Religious Holy Days Involving the Christian and Jewish Calendars During 1989-90

Fall Term

Saturday Sunday	September 30 and October 1	Rosh Hashanah
Monday	October 9	Yom Kippur
Saturday	October 14	Sukkot
Saturday	October 21	Shimini Atzeret
Monday	December 25	Christmas

Spring Term

Tuesday	April 10	Passover
Friday	April 13	Good Friday
Friday	April-13	Orthodox Good Friday
Sunday	April 15	Easter
Sunday	April 15	Orthodox Easter

Policy of Brandeis University pertaining to religious observances.

In constructing the academic calendar, religious holy days will not be the sole factor in determining days on which classes will be held or suspended. It is the policy of the University, however, that students be encouraged to observe their appropriate religious holy days, that instructors strive to facilitate this by allowing absence from classes for such purposes and by trying to insure that no examinations, written reports, oral reports or other mandatory class assignments are scheduled for or due on such holy days; and that instructors provide ample opportunities for such students to make up work missed on such occasions without penalty.

Brandeis University

Accreditation Statement

Brandeis University is recognized as one of the finest private liberal arts universities in the United States. Named for the late Supreme Court Justice Louis Dembitz Brandeis (1856-1941), the University was founded in 1948 under Jewish sponsorship as a nonsectarian institution offering the highest quality undergraduate and graduate education. It received accreditation within five years, the shortest possible time, and was awarded recognition by Phi Beta Kappa in 1961, only 13 years after its founding — the youngest institution to be so honored in more than 100 years.

Of the approximately 2,000 accredited colleges and universities in the nation, Brandeis is one of only 100 institutions recognized as research universities. Brandeis is a member of the Association of American Universities, and is accredited by the New England Association of Schools and Colleges. Because of its research capabilities and size, Brandeis is able to combine the breadth and range of academic programs usually found at much larger universities with the intimate educational atmosphere of an undergraduate college.

For full information on the undergraduate curriculum, please consult the Bulletin of the College of Arts and Sciences.

Brandeis University is a community of scholars and students united by their commitment to the pursuit of knowledge and its transmission from generation to generation. As a research university, Brandeis is dedicated to the advancement of the humanities, arts, social, natural and physical sciences. As a liberal arts college, Brandeis affirms the importance of a broad and critical education in enriching the lives of students and preparing them for full participation in a changing society, capable of promoting their own welfare, yet remaining deeply concerned about the welfare of others.

In a world of challenging social and technological transformation, Brandeis remains a center of open inquiry and teaching, cherishing its independence from any doctrine or government. It strives to reflect the heterogeneity of the United States and of the world community whose ideas and concerns it shares. In the belief that the most important learning derives from the personal encounter and joint work of teacher and student, Brandeis encourages both undergraduates and postgraduates to participate with distinguished faculty in research, scholarship and artistic activities.

Brandeis was founded in 1948 as a nonsectarian university under the sponsorship of the American Jewish community to embody its highest ethical and cultural values and to express its gratitude to the United States through the traditional Jewish commitment to education. By being a nonsectarian university that welcomes students and teachers of every nationality, religion and political orientation, Brandeis renews the American heritage of cultural diversity, equal access to opportunity and freedom of expression.

The university that carries the name of the Justice who stood for the rights of individuals must be distinguished by academic excellence, by truth pursued wherever it may lead and by awareness of the power and responsibilities that come with knowledge.

As adopted at the meeting of the Board of Trustees, December 6, 1984.

Brandeis University is accredited by the New England Association of Schools and Colleges, Inc., a nongovernmental, nationally recognized organization whose affiliated institutions include elementary schools through collegiate institutions offering post-graduate instruction.

Accreditation of an institution by the New England Association indicates that it meets or exceeds criteria for the assessment of the institutional quality periodically applied through a peer group review process. An accredited school or college is one that has available the necessary resources to achieve its stated purposes through appropriate educational programs, is substantially doing so and gives reasonable evidence that it will continue to do so in the foreseeable future. Institutional integrity also is addressed through accreditation.

Accreditation by the New England Association is not partial but applies to the institution as a whole. As such, it is not a guarantee of the quality of every course or program offered or the competence of individual graduates. Rather, it provides reasonable assurance about the quality of opportunities available to students who attend the institution.

Inquiries regarding the status of an institution's accreditation by the New England Association should be directed to the Office of the Provost and Dean of the Faculty, Brandeis University, P.O. Box 9110, Waltham, MA 02254-9110. Individuals may also contact the Association: Commission on Institutions of Higher Learning, New England Association of Schools and Colleges, Inc., The Sanborn House, 15 High Street, Winchester, MA 01890, 617-729-6762.

The Graduate School of Arts and Sciences

History and Organization

The Graduate School of Arts and Sciences was formally established in 1953 when the University's Board of Trustees authorized graduate study in the departments of Chemistry, Music, Psychology and Near Eastern and Judaic Studies. The general direction of the Graduate School is vested in a Graduate Council of the Faculty composed of the president and the dean of the faculty, ex-officio; the dean of the Graduate School; and one representative, usually the chair, of each of the several University departments and committees offering graduate instruction. The members of the Graduate Council are appointed by the president on the recommendations of the dean of the Graduate School. The functions of the Graduate Council, exercised in consonance with University policy, are to determine requirements for admission; to provide programs of study and examination; to establish and maintain requirements for graduate degrees; to approve candidacy for degrees; to make recommendations for new areas of graduate study; to lay down such regulations as may be considered necessary or expedient for governing the Graduate School; and to exercise a general supervision over its affairs. The dean of the Graduate School is the chair of the Graduate Council and the chief executive officer of the Graduate School.

Objectives

The underlying ideal of the Graduate School is to assemble a community of scholars, scientists and artists, in whose company the student-scholar can pursue study and research as an apprentice. This objective is to be attained by individualizing programs of study, restricting the number of students accepted, maintaining continual contact between students and faculty, and fostering the intellectual potential of each student. The graduate programs are designed to educate broadly as well as train professionally.

Degrees are granted on the evidence of intellectual growth and development, rather than solely on the basis of formal course credits. Fulfillment of the minimum requirements cannot, therefore, be regarded as the sole requisite for degrees.

Areas of Graduate Study

During the academic year 1989-1990, graduate programs will be offered in the following areas:

1. Anthropology
2. Biochemistry
3. Biology
4. Biophysics
5. Chemistry
6. Comparative History
7. Computer Science
8. English and American Literature
9. History of American Civilization
10. International Economics and Finance
11. Jewish Communal Service
12. Joint Program of Literary Studies
13. Mathematics
14. Music
15. Near Eastern and Judaic Studies
16. Physics
17. Politics
18. Psychology and Cognitive Science
19. Sociology
20. Theater Arts

Graduate School

The Graduate School office is located in the Rabb Graduate Center. The office is open Monday through Friday from 9:00 a.m. to 5:00 p.m. All requests for information, catalogs and application forms should be addressed to the Dean of the Graduate School of Arts and Sciences, Brandeis University, P.O. Box 9110, Waltham, MA 02254-9110.

University Libraries

The Brandeis University Libraries, consisting of the Main Library and the Gerstenzang Science Library, have combined collections of 800,000 volumes, 650,000 microforms, 260,000 U.S. documents, 7,100 serials and 62 newspapers.

The Main Library, composed of the Bertha and Jacob Goldfarb Library and the Rapaport Treasure Hall, houses collections supporting the humanities and the social sciences; Judaica and creative arts. In addition, the library is a selective government document depository, emphasizing labor, health, politics and statistics. There is also a legal reference collection, providing sources on both the state and federal levels.

The Judaica department's reading room houses one of the country's most important collections of reference materials and basic texts pertaining to Judaic and Islamic studies, the ancient Near East, and the modern Middle East. Current periodical indexes relating to these disciplines are also housed in the reading room.

The Norman and Rosita Winston Creative Arts Center houses the collections and facilities in music and fine arts. Over 13,000 volumes, emphasizing scholarly editions in medieval, Renaissance and baroque music, make up the musical score collection. In addition, there is a 1500-volume creative arts reference collection. The sound recording collection contains over 15,000 discs, tapes and cassettes with facilities to accommodate 72 listeners.

The Rapaport Treasure Hall is the home of the Special Collections Department and the Vito Volterra Cultural Center. This section includes the rare books collection, the manuscript collection and some Brandeis archival material. Among the most important collections are the Spanish Civil War collection, the Leonardo Da Vinci collection, the Vito Volterra collection on the History of Science and Mathematics, the McKew-Par Collection on Magellan and the Age of Discovery, and the Justice Brandeis Collection.

The Gerstenzang Science Library, located within the science complex to allow convenient access by its users, contains the collections supporting the physical and natural sciences and mathematics. Containing more than 100,000 volumes and over 900 periodical subscriptions, the library is a reference and research facility for the science complex, providing materials for advanced independent work as well as supporting instructional programs. The Brandeis University Libraries use an integrated automated system known as LOUIS (Library Online User Information System). As an online catalog, it offers access to most of the library materials in the University Libraries through terminals located around the library.

Special services are available in the libraries to assist in the research process. Librarians provide computerized literature searches of databases on a cost recovery basis. Access is available through BRS, Dialog, NLM (National Library of Medicine) and CAS (Chemical Abstracts Service). Orientation to the libraries and instruction in the use of the collections are available by request at the reference desks. The Interlibrary Loan Service provides books or photocopies of materials not owned by the University Libraries. Brandeis is a member of the Boston Library Consortium, composed of 12 academic and research institutions in the Boston area. The consortium provides virtually free interlibrary loans, a union list of serials and cooperative access to collections.

Admission

As a rule, only well-qualified men and women who have completed the normal four-year program leading to the bachelor's degree will be considered for admission to the Graduate School. Graduates of foreign schools and others who have completed the equivalent of a bachelor's degree program may apply, describing the educational program they have completed.

Testing

Applicants for admission to the graduate programs in biochemistry, biophysics, politics and psychology are required to take the Graduate Record Examination, including the aptitude test portion and preferably one advanced test in a field related to the proposed area of graduate study. Applicants to the International Economics and Finance program must submit results of either the GRE or GMAT. Applicants to the Jewish Communal Service program must submit the results of either the Graduate Record Examination or the Miller Analogies Test. All other applicants are urged to take the Graduate Record Examination. In order for the results of the Graduate Record Examination to be considered, the applicant should take the examination no later than January preceding the academic year for which application is made. Information concerning the Graduate Record Examination is available from the Educational Testing Service, Princeton, N.J. 08541-6155.

Foreign students, regardless of field of graduate study, are required to take the Test of English as a Foreign Language (TOEFL), Test of Written English (TWE) and Test of Spoken English (TSE) unless English is their first language. Applications for admission to the test should be made to TOEFL, Educational Testing Service, Princeton, N.J. 08541-6155, U.S.A. The test is administered at various established centers abroad.

Application

Specific requirements for each graduate program are to be found under the appropriate headings in this catalog. Each applicant should consult these requirements before filing an application. A student may apply to only one graduate department or program. Applicants to the Graduate School should write to the Dean of the Graduate School of Arts and Sciences, stating which program of study he or she wishes to enter. A catalog and appropriate forms will be forwarded to the applicant. The "Application for Admission" should be completed and returned in duplicate as soon as possible. Applicants requesting financial aid must file a GAPSFAAS form. Closing dates for receipt of applications by the several graduate departments are included with the application materials.

Applications for admission for the spring term must be filed by December 1. Students are not usually admitted at midyear, and those who do gain admission are not normally eligible for financial aid.

All applicants must arrange to forward, in duplicate, official transcripts of all undergraduate and graduate work. In addition, they must have forwarded, on forms provided by the Graduate School, two letters of recommendation, preferably from professors with whom they have studied in their proposed area of study. Applicants who have engaged in graduate study elsewhere should request at least one of the recommendations from a professor with whom they have done graduate work.

Many departments also require the submission of samples of work as well as the materials described above. Applicants should consult departmental requirements in a later section of this catalog for enumeration of additional materials to be submitted.

All applications must be accompanied by the application fee, payable by check or money order to Brandeis University. No application will be processed until this fee is paid.

Admission Procedure

All applicants are considered on a competitive basis. The number of students admitted each year in each department is limited so that the Graduate School may operate effectively under its distinctive principles of individualized study and apprenticeship. Consequently, admission may sometimes be denied to qualified persons. Meeting the minimum standards of admission merely qualifies the applicant for a place in the group from which final selections will be made. Selections are based on the applicant's ability to do graduate work of high quality, as shown by: the distinction of his or her previous record, particularly in the proposed area of study; the letters of recommendation submitted in support of the application; and his or her presumed adaptability to the particular graduate programs offered by Brandeis University. In addition, knowledge of foreign languages, relevant practical experience in the field, samples of work, the results of the Graduate Record Examination and indications of character are considered.

Each application for admission with all supporting records is first examined by the appropriate department or committee. The department or committee recommends to the dean of the Graduate School which applicants should be selected for admission and for financial aid. The dean reviews all applications in the light of departmental recommendations, and informs each applicant of the results in April.

Acceptance

A student who has been accepted for admission to the Graduate School will be notified by a letter specifying the date by which he or she must accept the offer of admission and awards, if any. If a student selected for admission indicates that he or she does not intend to accept the offer or fails to reply by the date specified, the admission offer becomes void and another applicant may be accepted.

Brandeis University subscribes to the "Resolution Regarding Scholars, Fellows, Trainees and Graduate Assistants" of the Council of Graduate Schools in the United States. The resolution states:

"Acceptance of an offer of financial aid (such as a graduate scholarship, fellowship, traineeship or assistantship) for the next academic year by an actual or prospective graduate student completes an agreement which both student and graduate school expect to honor. In those instances in which the student accepts the offer before April 15 and subsequently desires to withdraw, the student may submit in writing a resignation of the appointment anytime through April 15. However, an acceptance given or left in force after April 15 commits the student not to accept another offer without first obtaining a written release from the institution to which a commitment has been made. Similarly, an offer by an institution after April 15 is conditional on presentation by the student of the written release from any previously accepted offer. It is further agreed by the institutions and organizations subscribing to the above Resolution that a copy of this Resolution should accompany every scholarship, fellowship, traineeship, and assistantship offer."

Students who are accepted must provide the Graduate School Office with an official final transcript of their undergraduate record and of any graduate work in process at the time of acceptance. In addition, students who are accepted are **required to complete and return a medical questionnaire and a health insurance form**, which will be sent during the summer. Registration is conditional upon receipt by the University Health Office of these required forms.

If, after having been admitted, a student cannot attend, he or she should notify the dean of the Graduate School as soon as possible. If such students are to be admitted for a subsequent academic year, they must request reactivation of their applications at the appropriate time, and bring them up to date.

Foreign Students

Applicants who have been denied admission may reapply in a later year, particularly if they have had further training that would strengthen their applications or if they can submit additional letters of recommendation.

Admission to the Graduate School does not imply that the successful applicant has been accepted as a candidate for a graduate degree. Superior performance at Brandeis University is essential. Admission to candidacy for the M.A. or M.F.A. is granted by the graduate department or committee administering the program of study. Admission to candidacy for the Ph.D. is granted by the Graduate Council on the recommendation of the department or committee administering the program of study.

Readmission

Admission is valid only for one academic year. A student's record is reviewed annually, and he or she may be denied readmission. Students completing the requirements for the M.A. or M.F.A., and students who already hold a master's degree but who have not yet been admitted to candidacy for the doctorate, must make formal application for readmission by the first business day in March. The readmission application must be filed with the Graduate School Office.

Graduates of foreign colleges and universities who have the equivalent of an American bachelor's degree, and foreign students who have been graduated from American universities may compete for admission and financial assistance at Brandeis, which is authorized under Federal law to enroll nonimmigrant alien students.

Applications must be completed and returned by February 1 of the year in which the student seeks fall admission. Successful applicants will be notified as soon as possible.

Entrance Examinations. All applicants whose native language is not English must take the Test of English as a Foreign Language (TOEFL), Test of Written English (TWE) and Test of Spoken English (TSE); thorough competence in English is required for study at Brandeis. All applicants are urged to take the Graduate Record Examination (GRE). They should consult this catalog for the departments that may require this examination. For information concerning the administration of both these examinations, applicants should write to the Educational Testing Service, Princeton, N.J. 08541-6155.

Financial Aid. Financial aid in the form of scholarships, fellowships, teaching assistantships and research assistantships is available to only a few of the most outstanding students. In any case, the total assistance offered usually covers only a small proportion of the student's total annual expenses. Hence the students, when applying for admission, should indicate a means of financial support. At least \$7,500 in United States currency is necessary to cover living costs for the nine-month academic year, exclusive of expenses for tuition, travel and summer or vacation periods.

Employment. The regulations of the United States Immigration and Naturalization Service limit strictly the amount of paid work that a student from abroad may do. During the summer vacation, INS may permit a student to obtain off-campus employment. However, such permission cannot be guaranteed. Students must petition on special United States government forms, through the Office of International Programs, for permission to accept such employment.

Requirements for the Degree

The following general requirements apply to the awarding of graduate degrees in all areas of study. For specific program requirements students should consult the appropriate section of this catalog.

Master of Arts

In order to qualify for a master's degree, the student must complete the equivalent of one full year of graduate study at Brandeis University, ordinarily computed at a minimum of eight semester courses of approved study. Departments may, at their option, require more than eight semester courses of graduate study. Departments offering master's programs may require that the candidate demonstrate a reading knowledge of at least one foreign language and pass satisfactorily a general or qualifying examination which, at the department's discretion, may be in one or more parts and may be written, oral or both. Where a thesis is required for the master's degree, two copies must be submitted to the department chairman in final form no later than the first Friday in January for a February degree or May 1 for a May degree.

The master's degree must be earned within four years from the inception of graduate study at Brandeis University.

Master of Fine Arts

In order to qualify for the degree of Master of Fine Arts in Music, the candidate must complete with distinction 12 semester courses at the graduate level, and must meet the specific requirements for the degree as set forth under music, **Requirements for the M.F.A. Degree**, in a later section of this catalog. Two copies of the thesis or composition must be submitted to the department chairman in final form no later than the first Friday in January for a February degree or May 1 for a May degree.

In order to qualify for the degree of Master of Fine Arts in Theater Arts, the candidate must complete the equivalent of 16 semester courses at the graduate level and must meet the specific requirements for the degree outlined under Theater Arts, **Requirements for the M.F.A. Degree**, in a later section of this catalog. Students enrolled for specialization in dramatic writing must submit two copies of a play in final form in lieu of a thesis.

The Master of Fine Arts degree must be earned within five years from the inception of graduate study at Brandeis University.

Doctor of Philosophy

In order to qualify for the degree of Doctor of Philosophy, a student must ordinarily complete a minimum of three years of graduate study, including two full years of residence and a third year devoted to the preparation of a doctoral dissertation. Under certain conditions, credit for advanced standing will be granted for work taken in residence in graduate schools of other universities. Each department or committee reserves the right to require prospective candidates for the degree to perform work in excess of its minimum standards to assure thorough mastery of the area.

Prospective candidates may be required to demonstrate proficiency in at least one foreign language. In all areas of study the student must satisfactorily pass a general or qualifying examination, which, at the department's discretion, may be in one or more parts and may be written, oral or both. In addition, all prospective candidates must write a doctoral dissertation and defend it in a final oral examination.

To be eligible for the Ph.D. degree in a given year, the student must have (1) been admitted to candidacy for the doctorate, (2) completed all residence requirements and (3) passed all language and qualifying examinations, by the close of the semester preceding the semester in which the degree will be conferred.

Students entering Brandeis University with no previous graduate work must earn the doctorate within eight years from the inception of study. Students who are granted credit for a year of graduate work completed elsewhere must earn the degree within seven years from the inception of their study at Brandeis.

Language Requirements

There is no University requirement for foreign language competency at either the master's or doctoral level.

Each department or program determines which languages are acceptable as satisfying its foreign language requirement. Some departments may not require foreign language competency, while others may set requirements that will vary within the subfields offered by those departments.

In departments where languages are required, students are expected to satisfy the requirement as soon as possible. Completion of this requirement at another university does not satisfy the Brandeis requirement.

For specific requirements of each department or program, consult the departmental listing in the following section of this catalog.

Admission to Candidacy

A student who (a) has demonstrated a knowledge and mastery of the subject matter of the field at a level satisfactory to the department or committee, (b) has passed all departmental qualifying examinations, (c) has indicated a capacity for independent research of high quality and (d) has completed satisfactorily all specific department or committee requirements for admission to candidacy may, at the recommendation of the department or committee, be admitted under the rules of the Graduate Council to candidacy for the degree of Doctor of Philosophy. In order to be eligible for the degree, the student must be admitted to candidacy at least one semester before it is awarded.

Application for Graduate Degrees

Candidates for the M.A., M.F.A. and Ph.D. degrees must file with the Graduate School Office an application for the degree no later than December 1 for a February degree and no later than March 1 for a May degree of the academic year in which the degree is to be conferred. Upon written recommendation from a candidate's department or committee that the application be approved, the record will be reviewed by the Graduate Council which recommends the student to the University's Board of Trustees for the award of the degree. In case of failure or withdrawal from candidacy in any year, the student must reapply by filing a new application in a later year.

Dissertation and Final Oral Examination

When a student is ready to embark upon the preparation of a doctoral dissertation, a Dissertation Reading Committee of no less than three faculty members, at least one of whom is a tenured member of the faculty, will be appointed by the chairman of the student's department. The student's principal advisor will serve as the chairman of this committee. The Dissertation Reading Committee will guide the research for and preparation of the dissertation. When this committee certifies its approval of the dissertation to both the dean of the Graduate School and the chairman of the student's department, the latter, with the approval of the dean of the Graduate School, will appoint a Dissertation Examining Committee to preside over the student's Final Oral Examination and will notify the candidate of

the time and place of the Final Oral Examination at least three weeks prior to the scheduled date of the examination. Two copies of the dissertation, as well as an abstract of no more than 350 words, should be submitted to the Dissertation Reading Committee for approval. The style and format of the dissertation is determined by each department.

The dissertation, when approved by the readers, must then be deposited in the department office where it will be available for inspection by all interested members of the faculty for at least two weeks prior to the Final Oral Examination.

The department will publish in **The Brandeis Reporter** the time and place of the candidate's Final Oral Examination and the title of the doctoral dissertation. The Final Oral Examination will be open to any member of the faculty engaged in graduate instruction and to invited faculty members from other institutions.

The Dissertation Examining Committee, recommended by the department chairman and approved by the dean of the Graduate School, must be composed of a minimum of three faculty examiners, at least one of whom shall be a tenured member of the faculty and one of whom shall be from a graduate department outside the student's own, in a related area.

The examination may be restricted to a defense of the dissertation, or may cover the whole field of the dissertation. The candidate will be notified by his or her department or committee of responsibility for coverage prior to the examination.

A report, signed by the Dissertation Examining Committee, certifying the candidate's successful performance on the Final Oral Examination, will be submitted to the dean of the Graduate School.

If the Dissertation Examining Committee requires substantial revisions of the dissertation text, the revisions must be completed and accepted by the Committee within six months of the dissertation defense, otherwise the dissertation will be redefined.

Academic Regulations

Deposit and Publication of Dissertation

No later than the dates specified in the current Academic Calendar for February and May degrees, the candidate must deposit two copies of the finished dissertation, including the original typescript, in a state suitable for microfilm and Xerox publication. Both copies of the dissertation must have the signed approval of the dissertation supervisor and readers. One copy will be retained by the library, the other will be returned to the student, both bound. The candidate must also submit two copies of an abstract of the dissertation, not to exceed 350 words, which has been approved by the dissertation supervisor.

A detailed statement of the Graduate School publication regulations is available from the Graduate School Office. See also the statement in this catalog, under **Fees**, on the Final Doctoral Fee.

Registration

Every resident student must register in person at the beginning of each term, whether attending regular courses of study, carrying on research or independent reading, writing a thesis or dissertation, or utilizing any academic service or facility of the University. Students who have completed their residence requirements and who wish to utilize any academic service or facility of the University must also register.

There is a charge of \$10 if registration is not completed at the time specified in the Academic Calendar.

Registration consists of payment of all fees for the term and filing a Registration Card and other duly completed required forms. Program Cards are filed at a later date.

Program of Study

Before filing a Program Card, the student should plan a program of study in consultation with the chairman of the department. All courses for which the student registers for credit must be listed on the Program Card.

Audited courses must also be listed, noted as "audit," and the Program Card must be signed by instructors of such courses.

Graduate students may not register for an undergraduate course (numbered below 100) for degree or residence credit unless they secure the signed approval of both the instructor of that course and their department chairman or graduate advisor. The student must then petition the dean of the Graduate School for the desired credit and must receive approval before or at the time of registration. Credit will not be given for undergraduate courses taken to make up deficiencies in the student's preparation for a program of graduate studies, nor will credit ordinarily be given for language courses that are not part of the student's program of studies. Under no circumstances may a student receive credit toward completion of degree or residence requirements for courses undertaken to aid in the completion of language requirements. Scholarship students may not apply their scholarships toward the remission of tuition for undergraduate courses taken to remedy deficiencies. The completed Program Card must be signed by the department chairman before submission at registration, and the department chairman will certify whether the program of study is full-time or part-time and, if part-time, whether one-quarter, one-half or three-quarters time. Full-year courses must be re-entered at midyear. Students wishing to drop a full-year course at midyear must petition the dean of the Graduate School for permission, after receiving the written

approval of the instructor of the course and of the chairman of their department. Students may not register at midyear for a full-year course without the written approval of the instructor of the course and their department chairman.

Program Cards are filed approximately two weeks after the opening days of instruction (see Academic Calendar for specific date) and are considered to be final.

Auditing Courses

The privilege of auditing courses without fee is extended to all regularly enrolled graduate students except special students. Special students may audit courses by paying for them at the same rate as those taken for credit. No courses may be audited without the permission of the instructor. Auditors may not take examinations or expect evaluation from the instructor. No credit is given for an audited course.

Change of Program

Only under unusual circumstances are students allowed to drop courses after filing their Program Cards. To do so, a Course Change Card is obtained from and returned to the Graduate School Registrar. Courses must be dropped no later than one week prior to the beginning of an examination period. Each course dropped is subject to a \$10 fee.

Registration in Terms of Time

Advanced students — those who have completed two full years of residence, either by graduate work at Brandeis or by receiving credit for graduate work done elsewhere — may register in terms of time, subject to the signed approval of their department chairman. Their Program Cards must indicate that they are registering full-time or a specific fraction thereof (one-quarter, one-half or three-quarters).

Registration in terms of time is a device that helps to individualize programs of study and permits increased freedom for independent research for advanced graduate students. Registration in terms of time frees students to pursue a program of study that partially accepts or bypasses altogether the system of formal courses, although students registering in terms of time will usually register for an advanced research or dissertation course. Their time will be spent in such research and reading as will be most beneficial to their development as scholars.

Absence from Examinations

Students who are absent from a midyear or final examination without an accepted excuse will receive a failing grade for that examination. No students may be excused from such examination unless for emergency or medical reasons, nor may they be excused if they were able to notify the instructor in advance and failed to do so. Cases involving absence are referred to the chairman of the department who will decide whether a make-up examination shall be allowed and will notify the registrar of the Graduate School of his/her decision. The examination must be taken within six weeks of the opening of the next term.

Grades and Course Standards

Graduate students are expected to maintain records of distinction in all courses. Letter grades will be used in all courses in which grading is possible. In reading, thesis or research courses, if a letter grade cannot be given at the end of each term or academic year, credit ("CR") or no credit ("NC") may be used.

"NC" and any letter grade below B-minus are unsatisfactory grades in the Graduate School. A course in which the student receives an unsatisfactory grade will not be counted toward graduate credit.

At the end of each academic year the registrar of the Graduate School will issue to each student a report of grades and of degree requirements satisfactorily completed.

Incompletes

A student who has not completed the research or written work for any course may receive an "EI" (incomplete) or a failing grade at the discretion of the instructor in the course. A student who receives an "EI" must satisfactorily complete the work of the course in which the incomplete was given in order to receive credit for the course and a letter grade. An incomplete, unless given by reason of the student's failure to attend a final examination, must be made up no later than the end of the term following the term in which it was received. When failure to take a final examination has resulted in an "EI," resolution of that "EI" to a letter grade must occur within six weeks of the beginning of the next term. If a student requires additional time to settle an incomplete grade, he/she may petition the dean of the Graduate School

for an extension of time, provided the petition is signed by the instructor of the course and by the department chairman. Such a petition must be filed prior to the expiration of the deadline for making up an incomplete. An "EI" that is not resolved within the stated time limits will automatically become a permanent incomplete ("XI").

Credit for Work Done Elsewhere

Graduate level courses taken prior to matriculation at Brandeis University may not be counted toward fulfillment of the residence requirement for the Master of Arts degree, although a department may accept work taken elsewhere in partial fulfillment of specific course requirements for the degree. In that case, additional courses are designated to replace courses from which the student has been exempted.

A maximum of one term of residence credit for graduate level courses taken prior to matriculation may be counted toward fulfillment of the residence requirements for the Master of Fine Arts degree.

Students admitted to Ph.D. programs may file an application to have graduate level courses taken prior to matriculation counted toward fulfillment of residence requirements at this institution. A maximum of one year of residence credit may be granted. Applicants for transfer credit will not necessarily be granted the credit requested. Each department reserves the right to require of any student work in excess of its minimum standards to assure thorough mastery of the area of study. In all cases, courses being transferred must carry a grade of "B" or better and must have been earned at an appropriately accredited institution.

After completing one term of residence at a full-time rate, or the equivalent at a part-time rate, students eligible to apply for transfer credit may do so. Forms are obtained at the Graduate School Office and are submitted to the student's department for its approval. The form is then forwarded to the dean of the Graduate School for final approval. The dean will advise the applicant of any action taken.

Credit for work at another institution taken concurrently with studies in the Graduate School must be approved for potential transfer credit by both the student's department and the dean of the Graduate School prior to registration for such courses. Such approval is granted only in unusual circumstances. Students who formally cross-register with Boston College, Boston University and/or Tufts University through the Consortium do not need prior approval from the dean's office.

Residence Requirements

Residence requirements for all graduate degrees are computed by determining the amount of registration for credit and the tuition charges. Part-time students and teaching assistants pursuing part-time programs of study for credit complete their residence requirements when their fractional programs (one-quarter, one-half, three-quarters) total the amount required of a full-time student.

Master of Arts

The minimum residence requirement for all students is one academic year on a full-time graduate credit program at the full tuition or the equivalent thereof in part-time study. Transfer credit may not be applied to residence requirements for the Master of Arts degree.

Master of Fine Arts

The minimum residence requirement for all students in music is three terms at a full-time rate, at the full tuition rate for each term, or the equivalent thereof in part-time study. Residence may be reduced by a maximum of one term with approved transfer credit.

The minimum residence requirement for acting and design students in theater arts is four terms at the full-time rate and two terms at the post-resident rate or the equivalent thereof in part-time study. The minimum residence for students in dramatic writing is four terms at the full tuition rate or the equivalent thereof in part-time study. Residence may be reduced by a maximum of one term with approved transfer credit.

Doctor of Philosophy

The minimum residence requirement for all students is two academic years on a full-time graduate credit program for each year, at the full tuition rate for each year, or the equivalent thereof in part-time study. A maximum of one year's approved transfer credit may be granted toward residence for the Ph.D. degree.

Full-Time Resident Students

A full-time student is one who devotes the entire time, during the course of the academic year, to a program of graduate work at Brandeis University, to the exclusion of any occupation or employment. In exceptional cases, however, a student may accept outside employment with the approval of the department chairman.

A full-time program may include a combination of teaching and research assistance, work leading to the fulfillment of degree requirements, such as preparation for qualifying, comprehensive and final examinations, or supervised reading and research, or the writing of M.A. theses and Ph.D. dissertations, as well as regular course work.

A full-time resident student may take as many courses for credit in any term as are approved by the department chairman, but no student may receive credit for, or be charged for, more than a full-time program in any term. Thus the minimum residence requirement for any degree may not be satisfied by an accelerated program of study or by payment of more than the full-time tuition rate in any single academic year.

Ph.D. candidates and students for whom the M.A. and M.F.A. degrees are terminal degrees may continue as full-time students on completion of their residence requirements by registering at the post-residence fee rate (see page 13).

Part-Time Resident Students

A part-time student is one who devotes less than the entire time to a program of graduate work at Brandeis University. Students may register for a credit program of one-quarter, one-half or three-quarters time. A part-time student may engage in outside employment with the permission of the department chairman.

Students wishing to pursue part-time residence study leading to a graduate degree must explain in writing, at the time they seek admission, why full-time study is not possible. Students receiving financial aid from the University, who wish to change their status from full-time to part-time residency, must file with the Graduate School Office an explanation of why full-time study is no longer possible.

Post-Resident Students

A graduate student who has completed residence requirements and who registers in order to utilize academic services or University facilities while completing degree requirements is a post-resident student.

Special Students

Properly qualified persons who wish to audit or to take courses without working for a degree will be admitted. Special students are not eligible for University loans, scholarships, fellowships, teaching or research assistantships, nor will they be considered for resident counselorships. Special students who later wish to change their status to that of part-time or full-time students working for a degree must apply for admission as resident students. They must also file a special petition if they wish credit to be accepted for any courses taken at Brandeis as special students. Credit for such course work may be granted in exceptional cases.

Leave of Absence

Students who have not completed their residence requirements may petition for leave of absence. The petition must have the approval of both the chairman of the department and the dean of the Graduate School. Leaves of absence up to one year will normally be granted to students in good academic standing who present compelling personal reasons or need to do work off campus in connection with their graduate studies. Time spent on authorized leaves of absence will not be deducted from the maximum time permitted to complete degree requirements.

If for any reason a student must extend a leave of absence, he or she must request such extension in writing before the leave of absence expires. Failure to do so will result in being automatically dropped from the Graduate School roster.

Continuation

Graduate students who have completed residence requirements and who are not registered during the period in which they are completing degree requirements are considered Continuation Students. A student in this category is not eligible for a leave of absence, except for reason of ill health (see Fees, page 13).

Withdrawal

A student who wishes to withdraw from the Graduate School at any time before the end of the academic year must give immediate written notice to the department chairman and to the dean of the Graduate School. Failure to comply may subject the student to dishonorable discharge, refusal of readmission, cancellation of the privilege of securing an official transcript and, in the case of a student withdrawing within 30 days of the beginning of classes, loss of eligibility for partial refund of tuition. Such a student must pay tuition for the full term. Permission to withdraw will not be granted if the student has not discharged all financial indebtedness to the University or has not made arrangements for subsequent payment to the satisfaction of the controller's office.

Discipline and Student Judicial System

Exclusion, Dismissal or Expulsion

The University reserves the right to dismiss or exclude at any time any student whose character, conduct, academic standing or financial indebtedness it regards as undesirable. Neither the University nor any of its trustees or officers shall be under any liability whatsoever for its disciplinary action, exclusion or dismissal.

The University also reserves the right to revoke, cancel or reduce at any time any financial or honorific award made to any graduate student, for character, conduct, academic standing or financial indebtedness regarded by the University as undesirable; neither the University nor any of its trustees or officers shall be under any liability whatsoever for canceling, revoking or reducing any award.

Student Judicial System

The University establishes standards of student behavior and reserves the right to suspend or permanently dismiss students whose conduct warrants such action. The University will give due notice and, if requested, a hearing before the appropriate body. The Student Judicial System is administered by the Offices of Student Life and Residence Life. Standards, policies and procedures are published in the Student Handbook.

Annual Notice to Students Brandeis University Records Policy

Annually, Brandeis University informs students of the Family Educational Rights and Privacy Act of 1974, as amended. This act, with which the institution intends to comply fully, was designed to protect the privacy of educational records, to establish the right of students to inspect and review their educational records, and to provide guidelines for the correction of inaccurate or misleading data through informal and formal hearings.

Students also have the right to file complaints with The Family Educational Rights and Privacy Act Office (FERPA) concerning alleged failures by the institution to comply with the Act.

University policy explains in detail the procedures used by the institution for compliance with the provisions of the Act. Copies of the policy, which includes a directory of records listing all education records maintained on students by the institution, can be found in the offices of the University Registrar, the Dean of the College, the Graduate School and the Heller School. The policy is also on reserve in the Farber Library. Questions concerning the Family Educational Rights and Privacy Act may be referred to the Office of the University Registrar.

Public Notice Designating Directory Information

Brandeis University hereby designates the following categories of student information as public or "Directory Information." Such information may be disclosed by the institution for any purpose, at its discretion.

Category I

Name, local address and telephone number, date of birth, class (i.e., year of graduate study).

Category II

Dates of attendance and field of concentration at Brandeis, previous institution(s) attended and major field of study, awards and honors, degree(s) conferred and date(s) conferred.

Category III

Past and present participation in officially recognized sports and activities, physical factors (height, weight, etc.).

Currently enrolled students may withhold disclosure of any category of information under the Family Educational Rights and Privacy Act of 1974, as amended. To withhold disclosure, written notification must be received by the Graduate School registrar prior to the fall term registration deadline at Brandeis University. Forms requesting the withholding of such information are available at the office of the Graduate School registrar.

Students who withhold disclosure of Category I information will not appear in the student directory published annually by the University. Brandeis University assumes that failure on the part of any student specifically to request the withholding of information indicates individual approval for disclosure.

Fees and Expenses

Payment of tuition and other fees due on the day of registration is a part of the registration procedure. A student who is not prepared to pay such fees on the day of registration will be refused the privilege of registration. A student who defaults in the payment of indebtedness to the University shall be subject to suspension, dismissal and refusal of a transfer of credits or issuance of a transcript.

Such indebtedness includes, but is not limited to, delinquency of a borrower in repaying a loan administered by the Student Loan Office, and the inability of that office to collect such a loan because the borrower has discharged the indebtedness through bankruptcy proceedings. If the student is a degree candidate, his or her name will be stricken from the rolls.

A student who has been suspended or dismissed for nonpayment of indebtedness to the University may not be reinstated until such indebtedness is paid in full.

Application Fee: \$25. Payable by all applicants for admission at the time the application for admission is submitted. It is not refundable. Checks and money orders should be made payable to Brandeis University. No application for admission will be processed until this fee is paid. This fee is not required of Brandeis graduates.

Tuition Fee: The fees for tuition in the Graduate School for 1989-90 are as follows:

Full-time resident students: \$13,780 per year, or \$6,890 per term.

Part-time resident students:

<i>Per Term</i>	<i>Per Year</i>	<i>Fraction Program of Study</i>
\$5,167.50	\$10,335.00	Three-quarters
\$3,445.00	\$ 6,890.00	One-half
\$1,722.50	\$ 3,445.00	One-quarter

Special Students: \$1,725.00 per course per term.

In view of the constantly increasing costs of education, students may expect one or more tuition increase during their academic careers.

Post-Residence Fee: Students who have completed their residence requirements and who wish to continue in residence to utilize any academic service or University facility must register at the usual tuition rates. Graduate students whose tuition is not being paid from scholarship or fellowship funds awarded by the University or other sources may petition the dean of the Graduate School for a reduction of the post-residence fee to \$725. Students who continue to utilize any academic service or University facility after having completed residence, but who

have failed to register, are subject to disciplinary action by the dean of the Graduate School. A student who is eligible for registration on the post-residence basis may file a Program Card for full-time study, in terms of courses or in terms of time or any combination thereof, provided the department chairman approves of the program of study as being a full-time program and signs the Program Card.

Mixed Tuition Fee: If a student needs to register for only a part-time program (three-quarters, one-half or one-quarter) in order to complete residence requirements, but wishes to register for additional courses or take a fuller program of study, he or she shall be charged for the part-time program needed to complete residence, plus the post-residence fee.

Late Registration Fee: \$10. Payable for failure to complete registration at the time announced by the Graduate School Office. **Orientation Fee: \$5.** A one-time fee payable by students entering for the first time. **Change-of-Program Fee: \$10.** Payable by any graduate student who wishes to drop or add a course after deadline for filing Study Cards.

Orientation Fee: \$5. A one-time fee payable by students entering for the first time.

Change-of-Program Fee: \$10. Payable by any graduate student who wishes to drop or add a course after deadline for filing Study Cards.

Incomplete Records Fee: \$25. Payable for failure to complete administrative requirements by date(s) specified in the Academic Calendar and/or catalog (e.g., late filing of Health Examination Report, failure to register, etc.)

Continuation Fee: \$20. Payable annually by graduate students who have completed residence requirements and who are not registered during the period in which they are preparing for the completion of degree requirements. Students in this category are not eligible for leaves of absence.

Master's Fee: \$50. A candidate for the M.A. or the M.F.A. who is subject to the Continuation Fee and who earns a degree in any term following one in which he or she has not been in residence, shall pay the Master's Fee. The fee is chargeable only once.

Final Doctoral Fee: \$275. This fee covers all costs for the year in which the Ph.D. degree will be conferred, including the costs for the microfilm publication of the dissertation, publication of the abstract of the dissertation in Dissertation Abstracts, issuance of a Library of Congress number and appropriate library cards, binding two

copies of the dissertation, one for use in the University Library and one Xerox-printed copy in book form for the author. The Final Doctoral Fee covers the rental expenses for academic robes for graduation and the cost of the diploma. Students who have been in residence in their final year may deduct any tuition charges that they may have paid to the University in that final year. Students who have paid the Continuation Fee in the final year may deduct that fee from the Final Doctoral Fee.

NOTE: All candidates for the Ph.D. degree must pay the \$275 Final Doctoral Fee prior to the receipt of their degrees.

Reinstatement Fee: \$10. Payable by a student who, after withdrawal, suspension or dismissal, has been reinstated with the consent of the dean of the Graduate School.

Transcript Fee: \$2. Students, former students and graduates who request official transcripts of their records in the Graduate School are charged \$2 for each copy issued after the first one, which is free. Requests by mail for transcripts must be accompanied by a check in the correct amount, payable to Brandeis University. Transcripts will be issued only to those students whose University financial records are in order.

Diploma Fee: \$20. Payable by candidates for the M.A. and M.F.A. degrees.

Student Health Services Fee: \$260. Entitles the graduate student to use of the Health Services.

Student Insurance Fee: \$370. Payment of the Insurance Fee entitles the graduate student to participate in the benefits of the Health Insurance Program. The fee is payable at registration and no portion is refundable. Student insurance is optional for Special Students.

Student-Spouse Insurance Fee: \$625. This fee provides 12-month coverage for student and spouse in the Health Insurance Program. The fee is payable at registration and no portion is refundable.

Dependent Insurance Coverage: Although the health services offered at Stoneman Infirmary are not extended to dependents of students, an optional family health insurance plan is available to married students for a fee of \$860. Special Students are not eligible for this plan.

Parking Fee: \$25-\$75. Payable annually at fall registration for privilege of parking an automobile on campus. Fee varies with assigned parking area.

Financial Assistance

Refunds

The only fee that may be refundable, in part, is the tuition fee. No refund of the tuition fee will be made because of illness, absence or dismissal during the academic year. If a student withdraws, he or she may petition the dean of the Graduate School for a partial refund of tuition in accordance with the following:

1. Tuition

Withdrawal:

Before the opening day of instruction: 100% of the term's tuition.

On or before the second Friday following the opening day of instruction: 75% of the term's tuition.

On or before the fifth Friday following the opening day of instruction: 50% of the term's tuition.

After the fifth Friday following the opening day of instruction: no refund.

2. Scholarship

In the case of a scholarship student who withdraws, the student's account will be credited with the same proportion of the term scholarship as charged for tuition: 25% if the student leaves on or before the second Friday; 50% on or before the fifth Friday; and 100% thereafter. The balance of the scholarship will be canceled.

To help students whose records indicate scholarly promise, the University makes available special scholarships and fellowships and a variety of awards and work opportunities. No student is eligible for aid without filing with the Graduate School Office a standard financial aid form (GAPSFAS). All scholarships and fellowships are granted for one academic year; therefore, a registered student who holds a scholarship or fellowship must apply annually for a renewal by filing the "Application for Financial Assistance."

All awards are granted and accepted with the understanding that they may be revoked or reduced at any time for undesirable conduct or poor academic standing.

Ordinarily, no student may hold a fellowship, scholarship or teaching assistantship for more than two years of study for the M.A. degree, for more than three years of study for the M.F.A. degree or for more than four years of study for the Ph.D. degree. Ordinarily, no student may receive a scholarship, fellowship or teaching assistantship after one year of study at the post-residence fee. Priority in making awards is given to full-time students and teaching assistants.

In the case of a student receiving financial aid from Brandeis University, whether in the form of a teaching assistantship, scholarship or fellowship, the approval of the dean of the Graduate School is required, in addition to the approval of the department chairman, before the student may engage in outside employment.

Teaching Assistantships

Teaching assistants are resident students in the Graduate School who do part-time teaching as part of their training and are paid. The University has established teaching assistantships to enable distinguished graduate students to gain teaching experience while continuing their studies. Teaching assistants are eligible for other awards, including scholarships and fellowships.

Teaching assistantship appointments are made on the authority of the President of the University by the dean of the Graduate School who, in turn, acts on the recommendation of a student's department chairman. Appointments are made for periods of one year or one term, but are renewable. All awards of teaching assistantships to incoming students are conditioned on an interview with a University representative, prior to registration. The University reserves the right to terminate any appointment at any time for due cause. Conduct, character or academic standing that is regarded as undesirable may constitute cause, but the University need not assign any reason for the termination of an appointment at any time. All teaching assistantship appointments are made and accepted with this understanding, and neither the University nor any of its trustees or officers shall be under any liability whatsoever for the summary termination of a teaching assistantship.

Research Assistantships

Research assistantships are available in the science areas. First-year graduate students are not normally eligible for appointment. Application should be made to the chairman of the department or the committee administering the graduate program.

Scholarships

A scholarship is an award, on grounds of scholarly ability and need, of financial credit that will be used exclusively for remission of tuition fees. Full scholarships and partial scholarships are available. Scholarship students are liable for all but tuition charges.

Fellowships

A fellowship is an academic award of honor to outstanding students of good character to help them in furthering advanced study and research. The amount of the stipend depends on the quality of the student's record and performance; need is also considered in most cases. A fellowship recipient must pay tuition fees unless the award includes a scholarship in an amount covering tuition. No services are required of students for fellowship or scholarship awards.

Student Services

Loans

Stafford Loans (formerly the Guaranteed Student Loan Program or GSL). A student may be eligible for a Stafford loan if he or she meets the following requirements: (1) is accepted for enrollment or is attending Brandeis University and is in good standing as determined by the University; (2) is carrying at least one-half the normal full-time work load; (3) is a citizen or national of the United States or is in the United States for other than a temporary purpose; (4) can demonstrate need. An eligible student may be able to borrow up to \$7,500 in any academic year at an 8% interest rate, and does not have to begin repayment until six months after he/she ceases to be at least a half-time student. The total amount a student may borrow under the Stafford Loan Program, including both undergraduate and graduate school loans, may not exceed \$54,750. Special Students, regardless of whether they are full- or part-time, are ineligible for Stafford loans.

Information and applications for this program are available from banks, savings and loan associations and credit unions.

Students who plan to borrow through one of the participating sources must have on file at the Graduate School Office a current Graduate and Professional Student Financial Aid Service form (GAPSFAS). Forms may be obtained at the Graduate School Office or from the Educational Testing Service, Princeton, N.J. 08541-6155.

Office of Student Employment

The Office of Student Employment assists students who need and desire part-time work. Students seeking part-time work should register with the Office of Student Employment. New students are not assigned part-time work prior to arrival on campus.

Housing

Brandeis University has a limited number of apartment units available for single and married graduate students. All apartments are within easy walking distance of the campus. These include efficiency, one, two and three bedroom furnished apartments. Single students may rent a space in an apartment and request the Graduate Housing Office assign a roommate. The one bedroom apartments are particularly designed to allow use as two separate bedrooms with a common kitchen and bathroom. Early application for housing is encouraged.

Information, rental rates and copies of the housing contract may be obtained by writing to the Office of Residence Life, Brandeis University, P.O. Box 9110, Waltham, Massachusetts 02254-9110.

In addition, the Graduate Housing Office maintains Off-Campus Housing Services (OCHS). OCHS has listings of available housing in the area, a list of realtors who may be helpful in a search for housing, and descriptions and information about nearby neighborhoods and towns. OCHS does not serve as a real estate agent but rather as a resource to help in locating housing.

Dining Facilities

Graduate students may sign meal contracts for varying numbers of meals or buy cash meal books. Arrangements for these contracts are made at the office of the Director of Food Services in Kutz Hall. A kosher kitchen is also maintained. Individual meals and light snacks may be purchased at Usdan Student Center.

Health Services

Because health and medical care are an integral part of the University experience, the University Health Services provides a program of comprehensive medical and emotional care. An optional Health Participation Fee entitles students to medical services available at Mailman House without additional charge during the academic year. This fee does not pay for off-campus medical consultations, dental care, medications, laboratory tests, drugs, X-rays, reusable supplies or admission to the University's hospital, Stoneham Infirmary, and students are responsible for these charges.

In addition, each student is required to have personal health insurance. The student may elect to participate in the Student Health Insurance Plan offered through the University or may substitute membership in a comparable plan.

International students are required to have full United States or Canadian health insurance for themselves, their spouses and their children regardless of a national health insurance in their home country. They may enroll in the Student Health Insurance Program or may arrange alternate insurance with a company in the United States.

Both domestic and international students must provide documentation of health insurance coverage to University Health Services at the start of each academic year. Those who do not provide this information will be automatically enrolled in the Student Health Service Insurance Plan.

Except for limited day-care facilities, the Health Services and the use of the Stoneham Infirmary are available to students only during the period in which the University is in regular academic session.

Prospective students planning to matriculate in the graduate school must submit a Health Examination Report completed by the family or personal physician prior to registration. In addition to information about previous health and details of the physical examination, evidence of immunization against tetanus, polio, measles, mumps and rubella are required. Since students may not register until the requirements have been satisfied, it is strongly recommended that the Health Examination Report be submitted by July 1.

The Student Health Insurance Plan is designed to defray expenses of those situations that are beyond the scope of the Health Services; for example, laboratory and X-ray examinations, as well as hospitalization for illnesses or accidents of a more serious nature. The plan extends for a full calendar year commencing with the first day of the academic year.

A detailed brochure of the services offered by the University Health Services as well as an outline of the details of the plan is mailed to students annually. Students and parents are urged to read this brochure carefully and keep it for reference. This brochure includes a statement of patients' rights in Health Services.

Whereas situations not covered within the Health Services or by the Insurance Plan are infrequent, an awareness of these possibilities will lessen misunderstanding and disappointment.

In such instances, students and their parents are responsible for expenses that are not covered by the University's health program or its associated insurance policy. Similarly, students and their parents are responsible for expenses that are not covered by alternative insurance programs substituted for the Brandeis University Student Health Insurance Plan.

Psychological Counseling Center — Mailman House

The Psychological Counseling Center, a part of the University Health Services, is located in Mailman House. At the Center, a professionally trained staff provides a range of counseling and psychological services designed to enhance personal development of students and to assist those who are experiencing personal or emotional problems. Individual counseling and brief psychotherapy are available both to undergraduate and graduate students; group therapy is also available on a limited basis. Students may make an appointment to see a counselor by applying directly to the Counseling Center office on the second floor of Mailman House.

Office of International Programs

The staff of the Office of International Programs serves as counselors and advisors to foreign citizens at Brandeis, including graduate and undergraduate students and foreign faculty. It aids the students and faculty in fulfilling the legal procedures required by the United States Immigration and Naturalization Service, i.e., obtaining extensions of stay, special permits to work and the proper documents for leaving and re-entering the country. The office coordinates the Brandeis host family program and provides assistance and referral services through the year.

The office also provides counseling Services for Brandeis undergraduates and graduate students who seek to enrich their education through a period of study abroad. It also maintains a resource library of materials on available programs. The office provides information and assistance in obtaining foreign study grants available through Fulbright, Rhodes, D.A.A.D., Marshall and other scholarship and fellowship programs.

English as a Second Language Program

International graduate students whose native language is not English are required to take the Diagnostic English Proficiency Examinations and to have an oral interview approximately one week before the beginning of classes. Prospective teaching assistants may be asked to give an oral presentation as well. On the basis of the examinations and the interview, a student may be required to enroll in the English as a second language program.

The English as a second language program provides tutorial and/or small class instruction throughout the academic year. The aims of the program are twofold: (1) to support all international graduate students in their efforts to achieve the high standards of oral and written English proficiency necessary for their success as students and (2) to support international teaching assistants in their efforts to develop the strong oral communications skills essential to their effectiveness as teachers.

Assignment to classes and/or a tutorial is dependent upon the student's skill in English as determined by the results of the test administered on admission. For students who have been awarded a teaching assistantship in their first year of study or expect to teach in a future year and whose English does not meet the University's minimum standard of proficiency, these courses are mandatory. For all others, it is recommended but not required.

No course credit toward the advanced degree is earned for these courses.

Academic Schools, Research Centers and Institutes

Crown School of Graduate Studies in American Civilization

The school's primary objective is to support gifted students in their work toward a doctorate in the History of American Civilization. Crown Fellowships are granted occasionally to special students on the Brandeis campus from both the United States and abroad who are drawn from important facets of public life including the media and the foreign service.

Danielsen School of Philosophy, Ethics and Religious Thought

The school includes the Department of Philosophy, which places traditional emphasis on logic, epistemology, metaphysics, value theory and the history of philosophy. The advancement of philosophical thought in the context of contemporary issues is encouraged through scholarly and interdisciplinary approaches. One of several endowed professorships in the school is the Albert V. Danielsen Chair in Christian Thought.

Fierman School of Chemistry

The school of chemistry offers highly diverse and advanced activities in inorganic, organic and physical chemistry. The school has been aided by grants from the National Institutes of Health, National Science Foundation, Department of Energy, Research Corporation and Petroleum Research Foundation. Research conducted under these agencies has been published in over 1,400 papers in leading professional journals.

Fisher School of Physics

The school of physics encompasses both theoretical and experimental physics on the graduate and undergraduate levels as well as a new program in engineering physics, and provides a setting for lectures and colloquia. Grants from agencies including the National Science Foundation and the Department of Commission support research programs in the Fisher School.

Gordon Public Policy Center

The Gordon Public Policy Center is the nation's first interdisciplinary, multi-university center for the study of public policy. Dedicated in 1987, the center was founded by the James Gordon Foundation of Chicago. It is the research home of political scientists, economists, sociologists, lawyers and historians from Brandeis, MIT, Boston College, Boston University, Harvard and Wellesley College. The center's mission is to analyze domestic public policy from the perspective of a number of academic disciplines to improve the implementation of public programs through research and evaluation, publications and direct practical service to those in government. It seeks to bridge the world of ideas and the world of action.

Kutz School of Biology

The school embodies the University's undergraduate and graduate biology departments. The curriculum is designed to teach at the molecular and cellular levels, and to present a comprehensive body of courses with special attention to current discoveries and experimentation. Students are encouraged to engage in original research and independent study. A major portion of the governmental, industrial and private research grants awarded to Brandeis is devoted to varied projects in biology and health sciences.

Lown School of Near Eastern and Judaic Studies

The school encompasses an intensive teaching and research program in all the main areas of Judaic studies, the Ancient Near East and the Modern Middle East. In addition, the Lown School has programs that prepare students for Jewish communal service and programs of research in areas of direct concern to the American Jewish community.

The Department of Near Eastern and Judaic Studies is the primary teaching and research unit in the Lown School. In this department the University has assembled an unusual array of distinguished scholars who offer an extremely broad curriculum. A second unit in the Lown School is the Benjamin S. Hornstein Program in Jewish Communal Service which provides graduate education for students interested in professional careers in Jewish communal service and Jewish education. The school also includes the

Center for Modern Jewish Studies, which is devoted to the study of contemporary Jewish life. The center currently engages in research and teaching in three major areas: population studies, Jewish identity and the family.

Benjamin Michtom School in Computer Science

This school encompasses a recently expanded, state-of-the-art, computer science program incorporating undergraduate and graduate instructional and internationally recognized research programs in the areas of computer science of theory, languages, systems and artificial intelligence. The computer science department, interdisciplinary in setup, fosters links on campus between the mathematics and physics departments as well as the Cognitive Science Program.

Rosenstiel Basic Medical Sciences Research Center

The center is one of the nation's leading centers for research programs in the basic medical sciences embracing work in biochemistry, biology, chemistry, microbiology, physics, biophysics and immunology. Staff members are jointly appointed to the Brandeis faculty basic science departments. The center invites participation of distinguished scholars and medical scientists, offers hospitality to younger researchers at the undergraduate and fellowship level, sponsors symposia and colloquia and underwrites scholarly publications.

The Rosenstiel Basic Medical Sciences Research Center contains sophisticated scientific equipment and facilities. Through cooperative programming, both with departments at Brandeis and in the Boston area, the center has broadened the scope of basic medical science research offerings at Brandeis. Grants from such agencies as the National Science Foundation, National Institutes of Health and American Cancer Society, among others, support research programs in the Rosenstiel Center.

The center sponsors the annual presentation of the Lewis S. Rosenstiel Award to recognize distinguished work in basic medical research.

Swig School of Political Science

The school, which includes the University's Department of Politics, offers a wide range of courses in American government, international relations, theory, methodology and comparative politics.

Several endowed academic chairs in the school include the Harry S. Truman Chair in American Civilization, the Earl Warren Chair in American Constitutional Studies, the Christian A. Herter Chair in International Relations and the Adlai E. Stevenson Chair in International Politics.

The Tauber Institute for the Study of European Jewry

The Tauber Institute for the Study of European Jewry seeks to study the history and culture of European Jewry in the modern period. It has a special interest in studying the causes, nature and consequences of the European Jewish catastrophe and seeks to explore them within the context of modern European diplomatic, intellectual, political and social history. The Tauber Institute for the Study of European Jewry is organized on a multidisciplinary basis with the participation of scholars in history, Judaic studies, political science, sociology, comparative literature and other disciplines. The institute is engaged primarily in research. Its government includes a distinguished Board of Overseers, which advises the director and works closely with the University. Members of the institute include fellows, faculty advisors, associates and graduate students.

Areas of Study and Courses — 1989-1990

All courses meet for three hours a week unless the course description indicates otherwise. The presence of "a" or "b" in the course number indicates a semester course; "e" indicates a full year course given in either the fall or spring term; "d" indicates a full year course; the use of "c" after a course number indicates that the course is given as a semester course but meets throughout the year.

The University reserves the right to make any changes in the offerings without prior notice. Faculty and course listings are accurate as of June 1, 1989.

American Civilization

See History of American Civilization

Anthropology

Objectives

The graduate program in anthropology, leading to the degree of Doctor of Philosophy, is designed to produce scholars who will broaden our knowledge of culture and society. Admission is limited to students whose primary interests lie within the fields of social and cultural anthropology (including linguistic anthropology) or archaeology. Most graduates of the program accept appointments at colleges and universities, although a number take employment in government, private institutions or foundations. Intensive training for independent research is stressed, with particular emphasis on comparative studies and fieldwork.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. Students need not have an undergraduate major in anthropology or sociology-anthropology. If admitted, however, the student without previous training in anthropology may be required to take additional courses, as determined by the department, to complete his or her residence requirements. Students should have a reading knowledge of one foreign language.

Faculty

Associate Professor
Judith T. Irvine,
Chair:
Ethnography of
communication.
Linguistics.
Social stratification.
Africa.

Professor
George L. Cowgill:
Mathematical and
computer methods in
archaeology.
Mesoamerican
civilizations.
Origins of early states.
Population
anthropology.

Professor
David Kaplan:
Economics.
Method and theory.
Peasant cultures.
Middle America.

Associate Professor
Robert C. Hunt:
Social anthropology.
Modernization.
Irrigation agriculture.
Mesoamerica.

Associate Professor
David E. Jacobson:
Social anthropology.
Medical anthropology.
Support systems.
United States.
Africa.

Associate Professor
Richard Parmentier:
Semiotic
anthropology.
Kinship. Historical
anthropology.
Communications and
media. Oceania.
Contemporary United
States.

Associate Professor
Benson Saler:
Comparative religion
and folk philosophies.
Psychological
anthropology.
Mesoamerica.
South America.
Pastoral peoples.

Associate Professor
Robert N. Zeitlin:
Sociocultural
evolution.
Prehistoric exchange.
Pre-state societies.
Archaeological
method and theory.
Mesoamerica.

Assistant Professor
Sally McBrearty:
Paleoanthropology.
Physical anthropology.
Hominid evolution.
East Africa.
South Asia.

Assistant Professor
David W. Murray:
Social and cultural
anthropology.
Symbolic
anthropology.
Linguistics. North
American Indians.

Assistant Professor
Judith F. Zeitlin:
Cultural ecology.
Archaeological
method and theory.
Mesoamerica.
Ethnohistory.

Lecturer
Brinkley Messick:
Cultural theory.
Law and political
economy.
Muslim societies.

Lecturer
Charles A. Ziegler:
Industrial and applied
anthropology.

Research Associates

George N. Appell:
Social anthropology.
Southeast Asia.

Clemency Coggins:
Prehistoric art and
archaeology of
Mesoamerica, lower
Central America and
Peru.

R. David Drucker:
Mesoamerica,
especially calendars
and astronomy.

Michael Folsom:
Industrial archaeology.
New England.

**Cornelia Ann
Kammerer:**
Kinship. Religion.
Gender. Southeast
Asia.

Emily H. Moss:
Old World
archaeology. Lithic
analysis.

Barbara B. Swann
Kinship. Bureaucracy
and local policies.
Comparative
government, East Asia
and the Pacific.

**Wilma
Wetterstrom:**
Archaeology. Cultural
ecology. Ethnobotany
and nutrition.

Degree Requirements Master of Arts

Program of Study.

Ordinarily students are admitted for the doctoral program only. Students may, however, petition to be awarded the M.A. degree if they have fulfilled the residence requirement set by the Graduate School and have met the following additional requirements: satisfactory completion of eight term courses, including three or more core courses from among those required for the Ph.D., as described below; demonstration of reading proficiency in a foreign language examination; departmental approval determined by the faculty at the first year evaluation; submission of an acceptable master's thesis. If a student is continuing toward the Ph.D., the Specialist Essay may be substituted for the master's thesis.

A temporary faculty advisor is assigned to each incoming student; by the end of the second term of study, the student is expected to recruit two members of the department to serve as his/her permanent advisory committee. The advisor, or advisory committee, is responsible, through regular meetings and informal consultation, for guiding the student's selection of suitable courses, helping to formulate a dissertation research project and supervising his/her progress through the program.

Students are evaluated at the end of the first full year of study to determine their eligibility to continue in the program. As a result of this evaluation, the department may permit the student to either complete the master's degree requirements or continue course work toward the Ph.D. degree.

Doctor of Philosophy

Program of Study.

Flexibility of curriculum allows the student to organize a program of study around his or her anthropological interests. At the same time, the program is structured so that students achieve a broad familiarity with other aspects of the discipline through seven core courses. During their two years of residence, unless exempted by virtue of previous graduate training, students must complete the following six core courses: ANTH102a An Anthropological Introduction to Language, ANTH 115b Biocultural Adaptation, ANTH 123a Directions and Issues in Archaeology, ANTH 200a History of Anthropological Thought, ANTH 203a Contemporary Issues in Anthropological Theory and ANTH 206a Comparative Social Institutions. The seventh core course may be either ANTH 102b Social and Cultural Aspects of Linguistic Analysis or ANTH 186a Mathematics and Computers. In individual cases, the department may approve a substitute course in quantitative methods. Through course work and outside reading, students are expected to attain a high degree of scholarly competence in at least one culture area and one topical field. Brandeis University is in consortium with Boston College, Boston University and Tufts University. Anthropology students wishing to cross-register for a course at any of these institutions must have prior approval of the department for the course to be counted toward degree requirements.

Qualifying Procedure.

During the residence years, the student demonstrates reading proficiency in an approved foreign language. Although the faculty may permit a student to delay fulfilling this requirement until a later stage in the program, in all cases the examination part of the requirement must be met before a student may be admitted to candidacy for the Ph.D. degree. At the completion of residence, students must submit a brief statement (300-500 words) of their tentative research plans to the graduate student advisor.

During the year following completion of residence and course requirements (normally the third year), the student takes the General Examination, which tests for overall mastery of the discipline. After passing the General Examination he/she writes a Specialist Essay that should focus on theoretical and/or topical issues relevant to the proposed dissertation research. This essay must demonstrate the student's capacity for independent research of high quality. The foreign language requirement must be completed during this period. This segment of the program can be completed in one year although some students will need more time.

Language Requirement.	A reading knowledge of at least one foreign language must be demonstrated by examination and by writing a research paper (such as a course paper) or dissertation in which sources in the chosen language contribute to the research. The examination part of this requirement must be passed before the student may be admitted to candidacy for the Ph.D. degree.	Dissertation and Defense.	The department will recommend to the dean of the Graduate School that a Ph.D. be awarded the candidate upon formal acceptance of a dissertation and after its successful defense in a Final Oral Examination. Details of the regulations for certifying approval of the dissertation and for the Final Oral Examination are found in earlier pages of this catalog.
Admission to Candidacy.	A student is admitted to candidacy for the Ph.D. upon satisfactory completion of 1) 16 term courses, including the seven core courses, 2) the General Examination, 3) the Specialist Essay and 4) a reading examination in a foreign language.		

Courses of Instruction

Anthropology 102a. An Anthropological Introduction to Language	A general introduction to anthropological perspectives on language. Topics will include: the organization of language as a communicative system; language in human evolution; linguistic approaches to cultural meaning and world-view; historical perspectives on language (language change, history and prehistory). Usually offered every year. Ms. Irvine	Anthropology 105a. Symbol, Myth and Ritual	Myth and ritual studied as two interlocking modes of cultural symbolism. Various theoretical approaches to myth are evaluated by looking at creation myths and political myths. Contrasts between performative, processual and spatial models of ritual analysis are explored through case material about initiation rites, social exchanges and funeral ceremonies. Finally, a synthetic understanding of myth and ritual is sought in topics such as ritual language, sacrifice and rites of power. Usually offered in even years. Mr. Parmentier
Anthropology 102b. Social and Cultural Aspects of Linguistic Analysis	Advanced topics in anthropological linguistics. The course will focus on three areas: 1) linguistic fieldwork and the analysis of unfamiliar languages; 2) linguistic variation and social structure; 3) current issues in semantics and pragmatics (the relation between meaning and use in cross-cultural perspective). Prerequisite: ANTH 102a or LING 100a. Usually offered in even years. Ms. Irvine	Anthropology 107a. Human Disease Ecology	This course is a general treatment of medical ecology. Topics include a basic introduction to epidemiology, disease evolution, disease and development, and malnutrition and disease. Special attention will be paid throughout the course to the interaction of culture and disease, and several examples of changing patterns of disease associated with cultural change will be examined in detail. Usually offered in even years. Staff
Anthropology 103b. Language, Culture and Society	A comparative study of social and cultural aspects of language. Topics to be explored include: How do social groups differ in their use of language? How does a person's speech contribute to the impression he/she makes on other people? How is conversation organized, and to what purpose? Students conduct a fieldwork project on speech in their own social milieu. Usually offered every four years. Mr. Murray	Anthropology 110a. Introduction to Human Evolution	An introduction to the study of the fossil evidence for human evolution. Lectures and informal labs will focus on a variety of topics, including how fossils are studied in general in reconstructing the past, the structure of the human skeleton and the different interpretations of the meaning of specific fossils of early man from Africa, Europe and Asia. Usually offered in even years. Ms. McBrearty

Anthropology 111a. Introduction to Primate Studies	<p>An introduction to the study of nonhuman primates paying special attention to studies of primates in their natural habitat. Topics focus primarily on the relationships of elements of an animal's feeding, social/maintenance and locomotor behavior to selected aspects of its environment.</p> <p>Usually offered in odd years.</p> <p>Staff</p>	<p>Anthropology 116a. Human Osteology</p> <p>This course is an introduction to human musculo-skeletal anatomy. After learning the names and locations of the major bones and muscle groups, the manner in which these anatomical structures interact to produce movement will be examined. Movements at each of the major joints of the human body will be discussed and integrated into an analysis of human locomotion and posture.</p> <p>Enrollment limited to 15 students.</p> <p>Usually offered in even years.</p> <p>Ms. McBrearty</p>
Anthropology 112a. Population and Poverty in the Third World	<p>It is misleading to blame the poverty of the Third World nations on "overpopulation." Nevertheless, explosive population growth hinders the solution of other problems. Most population programs have not been very successful. Household decisions affecting reproduction and fertility will be discussed from an anthropological perspective.</p> <p>Usually offered in even years.</p> <p>Mr. Cowgill</p>	<p>Anthropology 117a. The Archaeology of Cyprus I</p> <p>See CLAS 152a for description.</p> <p>Usually offered every third year.</p> <p>Mr. Todd</p>
Anthropology 113a. Human Variation	<p>An introduction to human biological variation. Differences between individuals and populations within human species in biological characteristics (body build, blood groups, skin color) will be analyzed using an adaptive approach. The utility of the racial model to understanding human variation will be evaluated and compared to that of other approaches. Several politically and socially controversial topics relating to human variation (race and I.Q., sociobiology) will be discussed in the semester.</p> <p>Usually offered every three years.</p> <p>Staff</p>	<p>Anthropology 118b. History of Anthropological Theory</p> <p>This course examines the intellectual precursors of the discipline of anthropology and then traces the development of the major modern schools. How was "mankind" as an intellectual object created? In predominantly lecture format, the course will be concerned with the social context of the beginning of anthropology and will identify the seminal thinkers and perennial issues they addressed. These issues will be pursued into their modern forms in the American, British and French schools.</p> <p>Usually offered every fourth year.</p> <p>Mr. Murray</p>
Anthropology 114b. Meaning in Anthropology: Interpretation and Performance	<p>Within studies that consider themselves symbolic, formal, psychological or cognitive, the question of meaning is a central concern. The major traditions defining this term have usually been the philosophy of language, including speech-act and discourse analysis, logic and formal linguistics, literary critical studies and more recently, the ethnolinguistics of peoples outside the Western tradition. We shall concern ourselves with these traditions of interpretive study, ranging from the classics of Douglas, Turner and Geertz to the contemporary focus on rhetoric, narrative discourse structure, presupposition and the dimensions of performance interaction.</p> <p>Usually offered in even years.</p> <p>Mr. Murray</p>	<p>Anthropology 119a. Conquest and Colonialism in Native Latin America</p> <p>An often overlooked topic in Latin American studies is an examination of the impact that Spanish and Portuguese colonialism has had on the inhabitants of the Americas. Within a hundred years after the Conquest, the once dense Indian populations had been reduced by as much as 90% and great imperial states like those of the Aztecs and Incas were transformed into a subjugated peasantry. In this course we will trace the historical development of post-Conquest Indian society, from the policies and cultural institutions of Iberian colonialism through the complex ethnic and economic interactions of different native groups within the modern nation states of Latin America.</p> <p>Usually offered every third year.</p> <p>Ms. J. Zeitlin</p>
Anthropology 115b. Biocultural Adaptation	<p>An advanced course dealing with human adaptation with particular emphasis on the interaction of elements of the biological and cultural adaptive system in human societies.</p> <p>Usually offered in odd years.</p> <p>Ms. McBrearty</p>	<p>Anthropology 120b. Anthropology of Law</p> <p>Law will be studied comparatively in relation to its social and cultural context. Western law will be placed in an evolutionary perspective and compared with "law ways" in different nonindustrialized societies. Basic concepts that will be examined cross-culturally, in simple and complex societies, include: ideas regarding responsibility and liability, types of social sanction and various and sometimes competing systems of social control.</p> <p>Usually offered every year.</p> <p>Mr. Messick</p>

Anthropology 123a. Directions and Issues in Archaeology	An examination of concepts involved in the archaeological study of prehistoric societies. Selected cases will be discussed as illustrations of major theoretical and methodological issues. Usually offered in even years. Mr. Cowgill	Anthropology 132a. Origins of African Cultures	African prehistory from the earliest cultures of the lower pleistocene to the beginnings of historic states. Usually offered in odd years. Ms. McBrearty
Anthropology 124a. Archaeology of the Aegean and Near East I	See CLAS 132a for description. Usually offered every year. Mr. Todd	Anthropology 134a. Muslim Cultures	This course provides an introduction to the anthropological study of cultures of the Middle East, with emphasis on Muslim societies. The course is problem oriented and asks students to engage in critical reading and discussion of current anthropological perspectives. Usually offered in even years. Mr. Messick
Anthropology 124b. Archaeology of the Aegean and Near East II	See CLAS 132b for description. Usually offered every year. Mr. Todd	Anthropology 136b. Magic, Witchcraft and Religion	An introduction to various attempts to characterize magic, witchcraft and religion and to theorize about their roles in human life. Among the questions discussed are these: What is usually meant by magic and why do people sometimes engage in practices that we label as magical? What roles do ideas about witchcraft and accusations of witchcraft sometimes play in social life and how do we account for those ideas and accusations? And what are some of the problems attendant on defining religion and on attempting to theorize about its origins and functions? Usually offered every year. Mr. Saler
Anthropology 125b. Investigations in an Unfamiliar Language	See LING 122b. Usually offered in even years. Ms. Irvine	Anthropology 137a. Modes of Thought	An exploration of world views among literate and nonliterate peoples with reference to the roles of social structure, language, literacy and experience in the development of ideas about reality and with regard to criteria suggested for evaluating the "rationality" of belief statements and behavior. Usually offered every year. Mr. Saler
Anthropology 127a. Irrigation and Social Evolution	Irrigation has played a very large part in the evolution and history of civilization. This course examines theory concerning the role of irrigation in social change and will concentrate on state formation, conquest of the frontier and economic development. Archaeological, historical and contemporary examples will be drawn from Asia, Mesopotamia, the Middle East, the Mediterranean basin, North and South America. Usually offered in even years. Mr. Hunt	Anthropology 141b. North American Indians	This course is concerned with the native peoples of North America from the time of European contact to the present day legal and political confrontations. The great variety of peoples will be surveyed, with attention given to representative languages, economies, world views and religious beliefs, form of social organization and distinctive types of man-environment transactions. There will be a concern, as well, with the Indian's symbolic role as the savage, natural counterpoint to civilization in European and American intellectual history. The course will conclude with a consideration of current land claims and political movements. Usually offered every fourth year. Mr. Murray
Anthropology 128b. The Provisioning of Cities	Cities must be provisioned with food, water, fuel, building materials and industrial supplies. How this is accomplished as a system is largely unexamined and of great consequence. Sustained provisioning is a complex system with ecological, political, social and cultural as well as economic dimensions. In this course we will develop a detailed model of urban provisioning through the use of social science concepts and of case studies drawn from the last 2,000 years of world history. Usually offered in even years. Mr. Hunt		
Anthropology 130a. The Archaeology of Syria-Palestine I	See CLAS 153a for description. Usually offered every fourth year. Mr. Todd		
Anthropology 131a. The Archaeology of Anatolia I	See CLAS 154a for description. Usually offered every third year. Mr. Todd		

Anthropology 143a. The Inca and Their Ancestors: Ancient Civilizations of South America	<p>From Voltaire to Marx and Engels, political theorists have often regarded the ancient Inca Empire as a unique experiment in utopian socialism. Modern scholars are more inclined to trace many of its basic features back to earlier prehistoric civilizations, where fundamental Andean social and economic institutions first arose. In this course we will use archaeological and ethnohistorical data to explore the historical development of these pre-Columbian cultures of the Andes and neighboring regions of South America, examining in particular their unique adaptations to the continent's diverse environments and the basis for their political unification in the Inca Empire.</p> <p>Usually offered every fourth year.</p> <p>Ms. J. Zeitlin</p>	Anthropology 148a. Rise, Function and Fall of Early Civilizations	<p>Regularities in the ways large-scale nonmodern societies work — and fail to work. Why did large-scale societies develop at all? What uniformities and what variation are exhibited by different instances? Why and how did they collapse? Ethnographic and historical data and leading anthropological theories will be reviewed, as well as archaeological evidence from Mesoamerica, Mesopotamia, China, Egypt and Peru.</p> <p>Usually offered every fourth year.</p> <p>Mr. Cowgill</p>
Anthropology 145a. Seminar in Mesoamerican Archaeology and Ethnohistory	<p>The topic of this seminar varies from year to year.</p> <p>Usually offered every fourth year.</p> <p>Mr. Cowgill</p>	Anthropology 150a. Spatial Analysis in Archaeology	<p>Techniques for identification of within- and between-site spatial patterns in archaeological materials, and approaches to their sociocultural interpretation. Substantial archaeology background is expected of students.</p> <p>Usually offered in odd years.</p> <p>Mr. Cowgill</p>
Anthropology 146a. Landscapes, Life and Climates of the Past	<p>An introduction to prehistoric human ecology, the course examines how people in the past interacted with the natural world and how it in turn shaped them. Using case studies, the course surveys the methods archaeologists use for reconstructing climates, flora, fauna and land formations. Most class sessions will be run as workshops or laboratories.</p> <p>Usually offered every third year.</p> <p>Ms. J. Zeitlin</p>	Anthropology 154b. Selected Topics in Comparative Religion: Seminal Works in the Study of Religion	<p>Readings and discussion of works by W.R. Smith, E.B. Taylor, William James, Sigmund Freud, Emile Durkheim and Max Weber.</p> <p>Usually offered in even years.</p> <p>Mr. Saler</p>
Anthropology 147b. The Rise of Mesoamerican Civilization	<p>We will examine the area of ancient high civilization lying between what is now Mexico and western Central America. From simple ice age beginnings to an abortive end through Spanish conquest, Mesoamerican civilization has been a subject of intense fascination to scholars interested in the development of complex societies. The course considers ways that environment, population growth, social structure, religion, ideology and other factors may have been related to the unprecedented achievements of its indigenous peoples — the Olmec, Teotihuacan, Maya, Zapotec, Aztec and others. In so doing, we may gain a better appreciation of the processes leading to the rise and decline of civilizations everywhere.</p> <p>Usually offered every third year.</p> <p>Mr. R. Zeitlin</p>	Anthropology 155b. Psychological Anthropology	<p>An examination of the relationship between sociocultural systems and individual psychological processes with a critical evaluation of selected theories and studies bearing on this problem.</p> <p>Usually offered every fourth year.</p> <p>Mr. Saler</p>
		Anthropology 156a. Power and Violence: The Anthropology of Political Systems	<p>Political orders are established and maintained by varying combinations of overt violence and the more subtle workings of ideas. The course examines the relationship of coercion and consensus and forms of resistance, in both historical and contemporary settings. Topics include the rituals of power in non-Western states, imperial conquests, colonial subjugation, the construction of nations, contemporary insurrections and violent and peaceful revolution.</p> <p>Usually offered in odd years.</p> <p>Mr. Messick</p>
		Anthropology 157a. Families and Households	<p>This course will describe and analyze several family types and households in contemporary American life, interpreting them in their cultural contexts and comparing them with similar arrangements in other cultures.</p> <p>Usually offered in odd years.</p> <p>Mr. Jacobson</p>

Anthropology 158a. Urban Anthropology	<p>Comparative study of strategies used in coping with the complexity and potential danger of urban life. Attention will also be given to analyzing and evaluating the theories, methods and data anthropologists and others use in their studies of urban social organizations.</p> <p>Usually offered in even years.</p> <p>Mr. Jacobson</p>	Anthropology 164b. Corporate Cultures	<p>The course examines the structure and internal dynamics of the modern corporation with special emphasis on corporate culture, i.e., the system of company-specific beliefs, values and norms that underlies work-related behavior of members. Formal and informal aspects of corporate organization will be described and the developmental trajectory of the firm from start-up to maturity will be correlated with changes in corporate culture. Topics include the effect of societal values on corporate culture (illustrated by a comparison of U.S. and Japanese firms); entrepreneurship; the family firm; the role of corporate rituals and myths; innovation and technological change; and the spin-off phenomenon.</p> <p>Usually offered in even years.</p> <p>Mr. Ziegler</p>
Anthropology 161b. Culture and Cognition	<p>What relationship is there between cognitive processes and cultural systems? Do cultural differences involve or affect people's perception, classification process, memory or modes of problem solving? Do they affect the course of cognitive development? This course will examine cross-cultural research in psychology and anthropology that attempts to answer these questions. Special attention will be given to the role of language, to the relation between magic and science, and the cognitive effects of literacy.</p> <p>Usually offered every year.</p> <p>Mr. Murray</p>	Anthropology 166a. The Nature of Human Nature	<p>This course will deal with various theories of human nature and the evidence for such theories. It will explore the way in which theories of the nature of man have figured in interpretations of culture. The course addresses the question: to what extent is culture the expression of nature and to what extent does it depart from nature?</p> <p>Usually offered every year.</p> <p>Mr. Saler</p>
Anthropology 162a. Anthropology and Psychoanalysis	<p>Survey of psychoanalytic theories advanced by Freud, Bettelheim, Roheim, Devereux and others regarding the idea of the unconscious. Using the experience of psychoanalytic therapy as our frame of reference, we will deal cross-culturally within fancy, initiation rites, funerals and myths. What is the contribution of psychoanalysis to an understanding of the relationship between the individual and society?</p> <p>Usually offered every third year.</p> <p>Staff</p>	Anthropology 171a. Cross-Cultural Inquiry in Social Science	<p>Relativism is the fundamental problem of social science and all cross-system investigation must confront it. Insider-outsider, emic/etic equivalence and other forms will be considered. The major solutions to the problem will be evaluated.</p> <p>Usually offered in even years.</p> <p>Mr. Hunt</p>
Anthropology 163b. Economic Anthropology: Production and Distribution	<p>All humans must equip and organize themselves to produce and distribute the necessities and luxuries of life. This course will sample different ways of producing and distributing food, tools, crafts and services. Most attention will be paid to "primitive" economies. The major concepts (property, work, surplus, scarcity, money) will be emphasized.</p> <p>Usually offered in odd years.</p> <p>Mr. Hunt</p>	Anthropology 175b. Reading Ethnography	<p>An analysis of representative classics and contemporary works in the ethnological literature. The aim of this course is to help students better understand the ethnographic accounts upon which much of social and cultural anthropology is based by examining their characteristic features or rhetoric and argumentation.</p> <p>Usually offered in even years.</p> <p>Mr. Jacobson</p>
		Anthropology 181b. Problems of Ancient Statecraft	<p>An advanced seminar on characteristic problems in the creation and maintenance of ancient states and empires and the means by which these problems were dealt with. Topics include struggles between central authorities and subordinates, problems of mobilizing resources, uses of ideologies and how ideas may constrain or actually drive social and material changes.</p> <p>Usually offered in odd years.</p> <p>Mr. Cowgill</p>

Anthropology 186a. Mathematics and Computers in Archaeological Data Analysis I	<p>Topics include basic descriptive statistics, logic of statistical reasoning, research design and sampling, use of statistical packages, an introduction to multivariate methods and uses and misuses of all these approaches for archaeological interpretation and theory building.</p> <p>Signature of instructor required.</p> <p>Usually offered every third year.</p> <p>Mr. Cowgill</p>	Anthropology 203a. Contemporary Issues in Anthropological Theory	<p>An intensive examination of the major paradigms of contemporary anthropological theory. Concentration on recent debates about fundamental distinctions such as explanation/understanding, comparison/particularism and material/symbolic analysis.</p> <p>Usually offered in odd years.</p> <p>Mr. Parmentier</p>
Anthropology 186b. Mathematics and Computers in Archaeological Data Analysis II	<p>A continuation of Anthropology 186a.</p> <p>Usually offered in odd years.</p> <p>Mr. Cowgill</p>	Anthropology 206a. Comparative Social Institutions	<p>This course introduces students to key anthropological conceptions of social institutions and their role in cross-cultural comparison. Included are examples such as status and role, household and family, lineage and descent group, network and alliance and class and stratification.</p> <p>Usually offered in even years.</p> <p>Staff</p>
Anthropology 188a. Materials in Ancient Societies	<p>A seminar and laboratory course meeting at MIT. Topic for 1989-90 will be metals.</p> <p>Usually offered every year.</p> <p>Signature of Brandeis coordinator required.</p> <p>Mr. Cowgill and Staff (at MIT)</p>	Anthropology 222-256. Readings and Research Courses	
Anthropology 188b. Materials in Ancient Societies	<p>See ANTH 188a for course description and special notes.</p> <p>Usually offered every year.</p> <p>Signature of Brandeis coordinator required.</p> <p>Mr. Cowgill and Staff (at MIT)</p>	222a and b. Readings and Research on the World Before Civilization	Mr. R. Zeitlin
Anthropology 194a. Native American Literature	<p>See COLIT 193a for description.</p> <p>Usually offered in odd years.</p> <p>Mr. Yglesias</p>	226a and b. Readings and Research in Archaeology	Staff
Anthropology 198a. Workshop in American Community Studies	<p>See AMST 198a for description.</p> <p>Usually offered every year.</p> <p>Mr. Folsom</p>	227a and b. Readings and Research in Linguistic Anthropology	Ms. Irvine
Primarily for Graduate Students		228a. Advanced Readings in Method and Theory	Mr. Kaplan
Anthropology 200a. History of Anthropological Thought	<p>An historical examination of major ideas and perennial problems in social thought that have led to the development of modern theory and method in anthropology. The principal schools of thought and significant figures associated with them in American, British and Continental traditions.</p> <p>Usually offered every year.</p> <p>Mr. Murray</p>	228b. Advanced Readings in Method and Theory	Mr. Messick
		229a and b. Guided Comparative and Historical Research	Mr. Hunt
		231a and b. Readings in Cognitive Culture	Mr. Saler
		232a. Readings in Development	Mr. Hunt
		232b. Readings in Housing	Mr. Hunt
		234b. Readings and Research in Anthropology of Law	Staff

235a and b. Readings and Research in Latin American Cultures	Mr. Hunt	259b. Conceptions of Personhood	Mr. Murray
237a and b. Readings and Research in African Cultures	Ms. Irvine	261b. Readings and Research in the Symbolic Anthropology of Japan	Mr. Murray
238a and b. Readings and Research in Urban Anthropology	Mr. Jacobson	Anthropology 300d. Seminar in Anthropological Fieldwork	Usually offered every year. Staff
239a and b. Readings and Research in North American Indians	Mr. Murray	Anthropology 302d. Summer Research Training	Fieldwork for three months during the summer under the supervision of a member of the staff. Staff
241a and b. Readings and Research in New World Ethnohistory	Ms. J. Zeitlin	Anthropology 304a and b. Readings and Research in Anthropological Field Methods	Staff
253a and b. Readings and Research in Economic Anthropology	Mr. Kaplan	Anthropology 305d. Anthropology Colloquium	Staff
254a and b. Readings and Research in Southeast Asian Ethnography	Mr. Appell	Anthropology 400d-414d. Dissertation Research	Independent research for the Ph.D. degree. 401d. Mr. Cowgill 409d. Mr. Saler 402d. Mr. Jacobson 411d. Ms. J. Zeitlin 403d. Mr. Hunt 412d. Mr. R. Zeitlin 405d. Ms. Irvine 414d. Mr. Parmentier 407d. Mr. Kaplan 415d. Mr. Murray
256a and b. Readings and Research in Religion	Mr. Saler		

Biochemistry

Objectives

The graduate program in biochemistry leading to the degree of Doctor of Philosophy is designed to equip students with a broad understanding of the chemical and molecular events involved in biological processes and to train them to carry out independent original research. Major emphasis in this program is placed upon experimental research work. However, students are required to complete formal course work in advanced biochemistry, molecular biology and physical biochemistry. Additional courses and seminars are available in a wide range of subjects including neurobiology, immunology, structural biochemistry, membrane biology and genetics. Students are encouraged to choose advanced courses and seminars according to their particular interests. Doctoral research topics are chosen in areas under investigation by the faculty; these include problems in macromolecular structure and mechanism, enzyme function and regulation, gene regulation, membrane transport and receptor functions, molecular pharmacology,

mechanisms of cell motility, microbial metabolism and the biochemistry of cellular electrical excitability. A theme running through most of the research here is the relationship of biochemical functions to underlying molecular structure and mechanism.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of the catalog, apply here. Applicants for admission to the biochemistry department are also required to take the Graduate Record Examination. It is strongly suggested that the applicant take one of the advanced sections (preferably chemistry or biology) of this examination. The student's undergraduate curriculum should include some fundamental courses in biology and chemistry.

Faculty

Professor
Christopher Miller,
Chair:
Structure and function of ion channel proteins. Membrane transport and mechanisms of electrical excitation.

Professor
Robert H. Abeles:
Mechanism of enzyme action. Design of highly specific enzyme in activators. Design of inhibitors with potential pharmacological significance. Mechanism of drug action.

Professor
Gerald D. Fasman:
Conformation of biological macromolecules. Chromatin structure, protein-DNA interactions. Protein models; synthesis and conformational studies of polyanino acids.

Professor
Thomas C. Hollocher, Jr.:
Role and mechanism of action of oxidation-reduction enzymes. Mechanism, enzymology and pathway of nitrogen indentrification and nitrification.

Professor
William P. Jencks:
Mechanisms of reactions catalyzed by enzymes, coenzymes, and by chemical catalysts. Mechanisms, catalysis and equilibria of reactions of "energy-rich" compounds of importance in biochemistry and chemistry. Mechanisms of conversion of chemical energy into osmotic and mechanical work.

Professor
Lawrence Levine:
Immunochemistry. Antibodies as analytical reagents for measuring pharmacologically important molecules. Mechanisms of arachidonic acid metabolism by cells in culture.

Professor
Irwin B. Levitan:
Neurobiology. Neurobiochemistry. Regulation of neuronal membrane properties.

Professor
John M. Lowenstein:
Role of phospholipids in hormone action. Regulation of metabolic pathways. Regulation and function of the purine nucleotide cycle; regulation of adenosine production in heart.

Professor
Susan Lowey
(Rosenstiel Center):
Structure and function of myofibrillar proteins and their relation to the muscle cell. Techniques will include physical chemistry, protein chemistry, fluorescence and electron microscopy.

Professor
Gregory Petsko
(Rosenstiel Center):
Protein crystallography.

Professor
Alfred C. Redfield
(Rosenstiel Center):
Magnetic resonance in biopolymers. Physical biochemistry. Macromolecular structure.

Professor
Serge N. Timasheff:
Physical chemistry of proteins, in particular, structure in solution and self-associating; self-assembling systems; ligand-mediated interactions; macromolecular properties of biological polymers.

Professor
Helen Van Vunakis:
Interaction of hallucinogenic, narcotic and carcinogenic compounds with specific antibodies and natural receptors. Nicotine metabolism and physiological effects.

Professor
Pieter Wensink
(Rosenstiel Center):
Molecular biology. Gene expression during development of higher organisms. The physical arrangement of genes within the DNA and the chromosomes of higher organisms.

Associate Professor
William T. Murakami:
Biochemistry of virus infection. Metabolism of virus-infected cells. Purification and characterization of polyoma viruses.

Associate Professor
Dagmar Ringe
(Rosenstiel Center):
Protein crystallography.

Assistant Professor
T. Christian Boles:
Structure of supercoiled DNA. In vitro reconstitution of recombination.

Assistant Professor
Jeff Gelles:
Enzymology of molecular motor proteins. High-resolution, quantitative video microscopy as a tool to study cell motility.

Assistant Professor
Daniel D. Oprrian:
Molecular biology of membrane receptors. Design and expression of synthetic genes.

Degree Requirements

Doctor of Philosophy

Program of Study.

Each doctoral candidate must satisfactorily complete the following fundamental courses: advanced biochemistry, advanced molecular biology, physical biochemistry and biochemical research problems, and four biochemistry seminars.

After the required courses are completed, the faculty will evaluate each student's performance to decide whether the student should continue working towards the Ph.D. degree or the Master of Arts degree.

Financial Support.

Graduate students receive financial support (tuition and stipend) throughout their participation in the graduate program. This support is provided by a combination of University funds, training grants and individual research grants.

Teaching.

As a part of the graduate training program, students are required to participate as teaching assistants for two semesters. No laboratory teaching is required.

Language Requirements.

There is no foreign language requirement for the Ph.D. degree.

Qualifying Examinations.

An oral qualifying examination must be taken generally at the beginning of the second year. In this examination, the student will be asked to defend or refute two propositions. One proposition will be assigned in an area of research outside the student's immediate area of specialization, and one will be an original proposition put forth by the student for a research problem in his or her area of interest (this is not necessarily a problem upon which he or she will carry out research).

In addition, the student must demonstrate general knowledge of biochemistry in a series of three area examinations: physical biochemistry and macromolecules, metabolism and enzymology, and molecular biology. Students are expected to have taken three examinations by the end of the third year; two of these must be taken by the end of the second year. This general knowledge outside the student's own field of specialization must be demonstrated to the satisfaction of an advisory committee of four department faculty members.

Admission to Candidacy.

At some time before the second semester of their third year, students will present to a committee of four members of the department a summary of their research accomplished to date, including the most significant experimental data and detailed plans for the completion of a research project. The committee will recommend whether the research project should be continued as a partial fulfillment of the requirements for the Doctor of Philosophy degree. After completion of the research report and the three area examinations at a level satisfactory for the Ph.D. degree, the student will be admitted to candidacy.

Dissertation and Defense.

A dissertation will be required which summarizes the results of an original investigation of an approved subject and which demonstrates the competence of the candidate in independent research. This dissertation will be defended in a Final Oral Examination.

Courses of Instruction

Biochemistry 100a. Introduction to Biochemistry	<p>Chemistry, reaction and metabolism of biologically important compounds. Formation and utilization of "energy-rich" compounds. Introduction to enzyme mechanisms. An attempt will be made to interrelate and compare basic biochemical and chemical processes. Metabolic regulation.</p> <p>Offered every year.</p> <p>Prerequisites: CHEM 25a and b.</p> <p>Section 1, Fall: Mr. Lowenstein Section 2, Fall: Ms. Lowey</p>	Biochemistry 140a. Introductory Neuroscience for Graduate Students	<p>This course will introduce the graduate student to the basic principles of neurobiology. Topics to be covered include: ion channels and their role in generating resting and action potentials; basics and synaptic physiology and pharmacology; biosynthesis and release of neurotransmitters and hormones; interactions of neurotransmitters and hormones with receptors; basic principles of neurodevelopment, plasticity and learning. Three lecture hours a week with fourth hour discussion of research papers.</p> <p>Offered every year.</p>
Biochemistry 101a. Advanced Biochemistry I	<p>A discussion of enzyme reactions including energetics, kinetics, and reaction mechanism. Metabolism of carbohydrates, lipids, amino acids, nucleic acids, vitamins and coenzymes, hormones, and inorganic substances. Coupled enzyme reactions, such as oxidative phosphorylation, and the synthesis of macromolecules such as glycogen, protein and the nucleic acids. Regulated enzymes and regulation of metabolism.</p> <p>Offered every year.</p> <p>Messrs. Abeles, Jencks and Oprian</p>	Biochemistry 200d. Biochemistry Techniques	<p>Prerequisite: Biochemistry 101. May be taken concurrently.</p> <p>Offered every year.</p> <p>Mr. Lowenstein</p>
Biochemistry 101b. Advanced Biochemistry I	<p>A continuation of Biochemistry 101a.</p> <p>Offered every year.</p> <p>Mr. Murakami</p>	Biochemistry 202b. Chemistry of Enzyme-Catalyzed Reactions	<p>This course will deal with reaction mechanisms of catalysis in aqueous solution, some of which are relevant to enzymic catalysis.</p> <p>Usually offered in even years.</p> <p>Mr. Jencks</p>
Biochemistry 102b. Structural Molecular Biology	<p>See Biology 102b for description.</p> <p>Usually offered in odd years.</p> <p>Ms. Cohen</p>	Seminars	<p>One or two seminars will be given each semester. Each student will present oral or written reports on various aspects of the announced seminar topic. Topics are rarely repeated from year to year.</p>
Biochemistry 103a. Advanced Molecular Biology	<p>The fundamental principles of molecular biology will be stressed with respect to nucleic acid biosynthesis, structure, and physiological involvement. In addition, a description of events dealing with control of genetic information will be outlined.</p> <p>Offered every year.</p> <p>Mr. Wensink</p>	Biochemistry 219b. Advanced Topics in Molecular Biology	<p>Mr. Wensink</p>
Biochemistry 104b. Introduction to Physical Biochemistry	<p>Discussion of physical methods; molecular interactions; solvent effects; principles of folding; structural and conformation analyses by various spectroscopic and x-ray techniques.</p> <p>Offered every year.</p> <p>Messrs. Timasheff, Miller and Redfield</p>	Biochemistry 221b. Biochemistry of Motility	<p>Ms. Lowey</p>
		Biochemistry 232b. Ion Channel Proteins	<p>Mr. Miller</p>

Biochemistry

401d-422d.

Biochemical**Research Problems**

Independent research for the Ph.D. degree.

401d. Mr. Jencks

402d. Mr. Levine

404d. Mr. Timasheff

405d. Mr. Abeles

406d. Mr. Fasman

407d. Mr. Lowenstein

408d. Mr. Wensink

409d. Ms. Lowey

411d. Ms. Van Vunakis

413d. Mr. Hollocher

414d. Mr. Murakami

416d. Mr. Redfield

417d. Mr. Gelles

418d. Mr. Miller

419d. Mr. Levitan

421d. Mr. Oprian

422d. Mr. Boles

**Journal Club,
Colloquia and
Research Clubs**

In addition to the formal courses announced above, all graduate students are encouraged to participate in the department's Journal Club and colloquia. The Journal Club is an informal meeting of the students, staff and postdoctoral fellows, at which recent publications are discussed. Colloquia are general meetings of the department in which both speakers from the department and guest speakers will present their current investigations. Research clubs are organized by various research groups of the department.

Biology

Objectives

The graduate program in biology is designed to encourage and train students to develop their abilities to carry out independent and original research. Each student is expected to become familiar with the major areas of research currently being conducted within the department: molecular genetics and development, neurobiology, immunology, and cell and structural biology. In addition to a flexible curriculum of courses, designed for each student's specific program, entering students begin a series of laboratory rotations to acquaint themselves with current research techniques and to explore possible areas of thesis research. Students also are given opportunities to develop their confidence and ability to make oral presentations, beginning in the first year with a proseminar designed to discuss research methodology and continuing through a series of journal clubs. Each advanced student also presents an annual summary of his or her own research to the department. Research leading to a Ph.D. degree is carried out under the direction of one of the members of the biology faculty. Areas of research include: molecular biology of the regulation of gene expression, especially during development; chromosome structure and chromosomal rearrangements; developmental genetics; behavior genetics and neural development; biophysics of single nerve cells; integration of neural function; immunogenetics; immune cell differentiation and development; molecular biology of the immune system; regulation of muscle contraction; photobiology; molecular and cell architecture; organization of subcellular structures. A complete list of faculty research interests is available from the Department of Biology.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. The student's undergraduate record should ordinarily include courses equivalent to those required of undergraduates concentrating in biology at this institution. These are: general biology, genetics, cell physiology, developmental biology, and at least two additional elective courses. Students who are deficient in some of these subjects, but whose records are otherwise superior, may make up their deficiencies while they are enrolled as graduate students. In exceptional cases, students may be excused from some of these requirements. Students with serious deficiencies must, however, expect to add additional time to their graduate program in order to satisfy the deficiencies.

Applicants should take the Graduate Record Examination.

On being admitted to the Biology department, graduate students will report to the first-year graduate student advisor who will assist the student with formal entry into the department and later with their programs.

An important part of graduate training consists of laboratory experience. Since the summer months provide an opportunity for such work, unbroken by courses and other responsibilities, it is customary for graduate students to spend their summers doing research. In recognition of this, the Biology department provides 12-month stipend support for all full-time graduate students.

Faculty

Professor
Kenneth C. Hayes
(Director, Foster Biomedical Research Laboratory) Chair: Comparative nutritional pathophysiology in man and animals. Lipoprotein metabolism and atherogenesis, cholelithiasis.

Professor
Carolyn Cohen
(Rosenstiel Center): Structural molecular biology.

Professor
David J. DeRosier
(Rosenstiel Center): Structural studies of actin, actin-containing cytoskeletal assemblies and bacterial flagella.

Professor
Chandler Fulton:
Cell differentiation and selective gene expression in eucaryotic cells. Morphogenesis of cell shape and assembly of cell organelles, especially flagella.

Professor
Martin Gibbs:
Photosynthesis and plant physiology.

Professor
James E. Haber
(Rosenstiel Center): Genetics and molecular biology of yeast mechanisms of meiotic and mitotic recombination mating-type switching; healing of broken chromosomes; structure, function and regulation of plasma membrane ATPase.

Professor
Jeffrey C. Hall:
Neurogenetics and molecular neurobiology of higher behaviors in *Drosophila*.

Professor
Hugh Huxley:
Structure and function of muscle.

Professor
Atila O. Klein:
Regulation of development in higher plants by light. Control of growth, organelle development and macromolecular synthesis in the leaf.

Professor
John E. Lisman:
Mechanisms of phototransduction; molecular mechanism of memory storage.

Professor
Alfred Nisonoff
(Rosenstiel Center): Immunochimistry. Genetic control of the immune response. Regulation of Ige.

Professor
Michael Rosbash:
RNA processing and molecular neurobiology.

Professor
Jerome A. Schiff:
Plant biochemistry and physiology. Photocontrol of intracellular development. Sulphur metabolism.

Professor
Andrew G. Szent-Györgyi:
Regulation of muscle contraction at the molecular level.

Professor
Kalpana P. White:
Developmental neurogenetics.

Associate Professor
Eve E. Marder:
Neurotransmitter modulation of neural circuits.

Associate Professor
Joan L. Press
(Rosenstiel Center):
Developmental immunology and immunogenetics.

Associate Professor
Lawrence J. Wangh:
Molecular controls of DNA replication in *Xenopus* eggs.

Adjunct Associate Professor
Judith E. Tsipis:
Virology.

Assistant Professor
Susan T. Lovett:
Genetics and molecular biology of bacteria and yeast. Genetic and biochemical analysis of recombination.

Assistant Professor
Ranjan Sen:
Molecular immunology.

Assistant Professor
Timothy Tully:
Molecular biology. Genetics. Behavior. Memory.

Degree Requirements

At least one year of teaching experience (or equivalent) is required of all degree candidates.

Master of Arts

The goal of the Biology department is to train students in original research on the level of the Ph.D. Doctoral students who have successfully completed two years of course work may petition the department for the award of a master's degree.

Doctor of Philosophy

Program of Study.

Students will be expected to obtain a knowledge of the principles and techniques of the areas represented in the department, i.e., genetics, developmental biology, molecular biology, neurobiology, immunology and cell biology. The background a student is expected to have in these areas will be covered in courses given by the department. Entering students will do research rotations in at least three different laboratories. The student will be expected also to have additional background in his or her area of specialization as well as experience in seminar and research courses to be designated.

Each student will choose his or her specific field of interest and will apply for a permanent advisor to be agreed upon by the department at the end of the first year. The advisor will assist the student in planning a well-balanced program in his or her specific field of interest. In addition, the advisor will ordinarily serve as the chair of the student's dissertation examining committee.

Language Requirement.

There is no foreign language requirement for the Ph.D. degree.

Qualifying Examination.

The qualifying examination consists of two propositions. These are written and defended orally. Part 1 is taken in the middle of the second year. Part 2 is taken in the third year.

Admission to Candidacy.

To be admitted to candidacy, the student must have (a) completed all required course work, (b) passed the qualifying examination, and (c) been accepted by a graduate advisor.

Dissertation and Defense.

Each student will conduct an original investigation. With the approval of the student's advisor, however, research courses may be elected at any time. After submission of the dissertation, the candidate will be expected to present the principal results of his or her work and its significance during an examination in defense of the dissertation. A public seminar to one University community is also required.

Courses of Instruction

Biology 100a. Photobiology of Cells and Organelles	Basic photobiology including an introduction to the physical and chemical concepts involved, the influence of the changing solar spectrum on the course of evolution, the catalytic uses of light by living systems including photoperception (phototropism, phototaxis and the evolution of visual systems), photomorphogenesis (blue light and re-far red systems), photoinduced rhythms, and other biological responses to light, energy storage including the photosynthetic apparatus, membranes and reaction centers, photosynthetic electron transport and phosphorylation, photosynthetic carbon metabolism and photoreduction, utilization of assimilatory power in reductive reactions, the deleterious effects of light including photodynamic action, photoprotection, erythral effects, ultraviolet damage to the genetic material and its photorepair and the evolution of repair systems and medical applications.	Biology 104a. Structural Cell Biology	This is an advanced course in cell biology with an emphasis on the structure and function of cellular organelles, including specialized membranes, the cytoskeleton, flagella, the mitotic apparatus, etc. The aim of the course is to cover the concepts, applications and techniques of structural biology especially those involving electron microscopy and light microscopy.
	Usually offered in odd years.		Usually offered in odd years.
	Messrs. Gibbs, Schiff and Staff		Mr. DeRosier
Biology 101a. The Electron Microscope	One of the most powerful instruments in modern research is the electron microscope. With it, scientists can examine the outer surface of a whole beetle, the inner workings of cells and can even see single atoms. Find out how the machine works, how it is used and what it is used for.	Biology 105b. Eukaryotic Molecular Biology	The structure and control of eukaryotic genes and their products. Experimental support for current views of control will be emphasized. Research papers will be discussed.
	Usually offered every third year.		Usually offered in odd years.
	Mr. DeRosier		Staff
Biology 102b. Structural Molecular Biology	This course focuses on such topics as molecular recognition in protein-nucleic acid and protein-protein interactions. Experimental methods, such as X-ray crystallography and electron microscopy, will be included. Suitable for first-year graduate students and qualified undergraduates.	Biology 107a. Behavioral Genetics	Usually offered every fourth year.
	Usually offered in odd years.		Mr. Hall
	Ms. Cohen	Biology 122b. Advanced Genetics	A deeper and more detailed discussion of topics introduced in Biology 21b. Two basic approaches will be emphasized: cytogenetics and molecular genetics. Problems currently under investigation will be discussed.
Biology 103b. Advanced Topics in Cell and Molecular Biology	The course will examine a number of key questions concerning the molecular basis of a range of essential cellular mechanisms, and will analyze in detail the technical and theoretical advances that have made possible some of the crucial experiments on which our current knowledge is based.		Usually offered in even years.
	Usually offered in odd years.	Biology 124b. Animal Virology	Usually offered every third year.
	Mr. Huxley		Ms. Tsipis
		Biology 125a. Immunology	A discussion of the biological aspects of the immune response. Topics to be covered include antibody structure and function; properties and characteristics of the cells involved in cell-mediated immunity, transplantation immunity, allergy and humoral immunity; tolerance of the cellular perception of self and non-self; generation of antibody diversity; regulatory mechanisms involved in cell interaction, including suppression and genetic control; and aspects of tumor immunity.
			Usually offered every year.
			Mr. Nisonoff

Biology 140b. Introductory Neuroscience	<p>This course will introduce the basic principles of neurobiology. Topics to be covered include: ion channels and their role in generating resting and action potentials; basics of synaptic physiology and pharmacology; biosynthesis and release of neurotransmitters and hormones; receptors; basic principles of neurodevelopment, plasticity and learning. Three lecture hours a week with fourth hour discussion of research papers. For graduate students.</p> <p>Usually offered every year.</p> <p>Staff</p>	Biology 145b. Integrative Neuroscience	<p>This course will discuss how the nervous system processes information and generates behavior. Students will read the original research literature on topics that might include: generation of rhythmic behaviors in invertebrates and vertebrates; structure and function of the olfactory system; somatosensory cortex; auditory and visual processing; modulation of neural circuits during development and the adult; computational neuroscience. Classes will be discussion, lectures and student presentations. A research paper will be required.</p> <p>Usually offered every third year.</p> <p>Ms. Marder</p>
Biology 141b. Molecular Neurobiology	<p>This course is intended both to acquaint neurobiologists with the methods of molecular biology and to review important topics in molecular neurobiology. These topics include structure-function studies of proteins that are key to neuronal function, control mechanisms that underlie brain-specific gene expression and genetic-molecular approaches to understanding specific brain processes.</p> <p>Usually offered in even years.</p> <p>Mr. Rosbash</p>	Biology 146a. Behavioral Genetics	<p>Genetic bases of behaviors from simple reflexes and taxes to more higher-order forms such as learning, memory, biological rhythms, personality traits, affective disorders, etc. Two basic methodologies will be reviewed — a quantitative description of the genetic architecture that produces variability among individuals for any particular behavior and a qualitative description of single-gene mutants that disrupt normal behavior. The second is used to unravel the mechanisms of behavioral responses. After focusing on fundamental concepts, course material will deal with the issue of genetic determinism for such traits as “intelligence.” Organisms studied will range from bacteria to human, including nematodes, fruit flies and rodents.</p> <p>Usually offered every third year.</p> <p>Mr. Tully</p>
Biology 143a. Developmental Neurobiology	<p>Mechanisms used in the formation of the nervous system will be discussed. Topics to be covered include determination of the neuronal precursors, pattern formation in the nervous system, neuronal differentiation and mechanisms responsible for neural specificity. The course will consider the use of modern cellular neurobiological techniques, molecular biology and neurogenetics to address questions in neural development. Research papers will be discussed. Prerequisite: Biology 61a and signature of instructor.</p> <p>Usually offered every fourth year.</p> <p>Ms. White</p>	Biology 147a. Neurogenetics	<p>Development and function of the nervous system and responses of excitable cells, studied in neurological and behavioral mutants. Characterization and manipulation of genes, defined by these mutations, using molecular biological tools. Organisms: microbes, roundworms, fruit flies, mammals. Neurobiological areas: embryonic neural development, nerve cell differentiation and pattern formation, membrane excitability, responses to visual and chemical stimuli, biological rhythms, reproductive behavior.</p> <p>Usually offered every third year.</p> <p>Mr. Hall</p>
Biology 144b. The Neurobiology of Memory	<p>This course surveys what is known about one of the principal unsolved problems in neurobiology, the question of how memory is stored. Topics to be covered include definition of the types of memory, experiments implicating different brain regions in memory, genetic and pharmacological perturbations of memory and neural network approaches to memory. The principal focus, however, will be the cellular and molecular basis of memory. Anatomical, biochemical and physiological work on long-term potentiation in the hippocampus and sensitization in Aplysia will be extensively discussed.</p> <p>Usually offered in even years.</p> <p>Mr. Lisman</p>	Biology 161b. Developmental Genetics	<p>The course will consider the use of classical genetics, cytogenetics and molecular genetics in the analysis of developmental problems. Developmental processes such as oogenesis, embryogenesis and gene amplification will be used as framework for discussion of such genetic techniques as gyandromorph mapping, somatic recombination, cytoplasmic and cellular transplantation, <i>in situ</i> hybridization, somatic cell recombination, etc. Readings will be assessed from the literature.</p> <p>Usually offered every fourth year.</p> <p>Mr. Hall</p>

Biology 175b. Advanced Immunology	Recent advances in immunobiology. The format will include lectures to introduce the subject material and a detailed analysis with student participation of papers in the current literature. Topics that will be considered will include: recent advances in the molecular biology of antibodies and T cell receptors; the structure of the antibody combining site and its interactions with antigens; antigen processing and its role in T cell stimulation; factors influencing B cell differentiation, including lymphokines. Usually offered in even years. Ms. Press	Biology 401d. Photobiology and Plant Physiology Mr. Schiff
		Biology 402d. Photobiochemistry and Plant Metabolism Mr. Gibbs
		Biology 403d. Immunochemistry: Genetic Control of the Immune Response Mr. Nisonoff
Biology 177b. Molecular Immunology	This course will cover studies of the immune system at the molecular levels with emphasis on work presently being done in the field. The format of the course will be student analysis and discussion of papers in the current literature. Usually offered in odd years. Mr. Selsing	Biology 404d. Developmental Neurobiology Ms. White
		Biology 405d. Cell Differentiation and Morphogenesis Mr. Fulton
Biology 200a. Proseminar.	Usually offered every year. Mr. Selsing	Biology 406d. Neurophysiology Ms. Marder
		Biology 407d. Structural Biochemistry Ms. Cohen
Courses in Research		
Biology 300a and b. Biological Research	Primarily for the first-year student with the purpose of introducing him or her to biological research and to the work in progress in the laboratories of a number of faculty members. In consultation with the graduate advisor, the student plans a sequence of such tenures, each comprising 12 weeks or more, and then carries out experimental investigations under the guidance of the faculty members involved. Offered every year. Staff	Biology 408d. Behavioral Genetics Mr. Hall
		Biology 409d. Biophysics of Visual Transduction Mr. Lisman
		Biology 410d. Plant Development Mr. Klein
		Biology 411d. Gene Control Mr. Wangh
Biology 305d. Topics in Molecular Genetics and Development	Usually offered every year. Staff	Biology 412d. Structural Molecular Biology Mr. DeRosier
Biology 306d. Topics in Neurobiology	Usually offered every year. Staff	Biology 413d. General Physiology Mr. Szent-Györgyi
Biology 307d. Topics in Immunology	Usually offered every year. Staff	Biology 414d. Gene Organization Eukaryotes Mr. Rosbash
Biology 308d. Topics in Plant Physiology, Biochemistry and Metabolism	Usually offered every year. Staff	Biology 415d. Biochemistry and Genetics of Differentiation Mr. Haber
		Biology 417d. Muscle Physiology Mr. Huxley

Biology 418d.
**Developmental
Immunology**

Ms. Press

Biology 423d.
**Mechanisms of
Recombination**

Ms. Lovett

Biology 420d.
**Nutritional
Patho-physiology**

Mr. Hayes

Biology Journal
Clubs

There are a number of informal Journal Clubs that discuss topics of concern to the various specialties. These will meet regularly (usually two hours a week) throughout the year under the auspices of the staff. Students are required to attend at least one of these Journal Clubs.

Biology 421d.
**Molecular
Immunology**

Mr. Sen

Biology 422d.
**Molecular Biology.
Genetics and
Biochemistry of
Drosophila.
Learning and
Memory.**

Mr. Tully

Biophysics

Objectives

The interdepartmental graduate program in biophysics, leading to the degree of Doctor of Philosophy, is designed to provide a broad background in the physics and chemistry of living processes and to develop the students' capacity for independent research. The program offers opportunity for study and research in biophysical chemistry, cellular physiology, molecular genetics, photobiology, psychophysics and structural biology. Applicants are expected to have strong backgrounds in physical science with undergraduate concentrations in biology, chemistry, mathematics, physics or engineering.

Admission

The general requirements for admission to the Graduate School are given in an earlier section of this catalog. Applications should include, in addition to letters of reference, a personal statement giving reasons for choosing biophysics and indicating areas of interest. Applicants are required to take the Graduate Record Examination and are encouraged to visit Brandeis for interviews, if possible.

Faculty Advisory Committee

Professor
Carolyn Cohen
(Biology), Chair

Professor
John E. Lisman
(Biology)

Professor
Christopher Miller
(Biochemistry)

Professor
Donald Caspar
(Physics)

Professor
Alfred G. Redfield
(Physics and
Biochemistry)

Associate Professor
Judith Herzfeld
(Chemistry)

The faculty of the Biophysics Program is composed of members of the Biochemistry, Biology, Chemistry and Physics departments. About 20 faculty members participate in this graduate program.

Degree Requirements

Doctor of Philosophy

Program of Study.

Since Biophysics is a very broad field and students may have widely different backgrounds and goals, the course of study is flexible. During the first year, students take Biophysics 300, a course in which students meet with selected faculty members to explore areas of research. Students are also required to successfully complete Biophysics 200b.

In addition, students generally complete the following courses: Advanced Biochemistry (Biochemistry 101a), Introduction to Physical Biochemistry (Biochemistry 104b), Structural Molecular Biology (Biology 102b) and The Electron Microscope (Biology 101a). Courses to complete the student's program will depend on the student's background and interests. The additional courses may be in the areas of biochemistry, biology, biophysics, chemistry, mathematics, photobiology or physics.

Language Requirements.

Reading knowledge of one foreign language, chosen from French, German or Russian. A knowledge of computer programming may be substituted.

Admission to Candidacy.

Students are admitted to candidacy on the basis of academic performance and on research proposals that they develop and defend, generally during the second year of study. Students must pass Biophysics 200b in order to qualify for admission to candidacy.

Dissertation and Defense.

Each doctoral candidate will submit a dissertation describing his or her research and will be required to defend it in a Final Oral Examination.

Courses of Instruction

Biophysics 200b. Seminar in Biophysical Research	<p>A required seminar for biophysics majors which will deal with current biophysical research. Emphasis is on the understanding, critical evaluation and use of scientific literature. Students will discuss topics from the areas of biophysical chemistry, cellular physiology, molecular genetics, photobiology and structural biology, based on the reading of significant articles. In consultation with the faculty, each student will develop a research proposition based on independent reading and will prepare a research plan in the form of a thesis proposal.</p> <p>Open to graduate students in other sciences with permission of the instructor.</p> <p>Offered every year.</p> <p>Mr. Caspar</p>	Biology 102b. Structural Molecular Biology	<p>Usually offered every year.</p> <p>Ms. Cohen</p>
Biophysics 300. Introduction to Research in Biophysics	<p>Students carry out a project in the research laboratory of one of the faculty members. Projects and faculty are selected from the departments of biochemistry, biology, chemistry and physics. At least three terms of Biophysics 300 are required.</p> <p>Offered every year.</p> <p>Staff</p>	Biology 103b. Advanced Topics in Cell and Molecular Biology	<p>Usually offered in odd years.</p> <p>Mr. Huxley</p>
<p>Students register for Dissertation Research in the 400 series with a faculty member in the department in which they are doing their research.</p>		Biology 104a. Structural Cell Biology	<p>Usually offered in odd years.</p> <p>Mr. DeRosier</p>
<p>Following is a partial list of advanced courses which may be of interest to students in the Biophysics Program.</p>		Biology 105b. Eukaryotic Molecular Biology	<p>Usually offered in odd years.</p> <p>Staff</p>
Biochemistry 104b. Introduction to Physical Biochemistry	<p>Usually offered every year.</p> <p>Messrs. Timasheff, Müller and Redfield</p>	Biology 140b. Introductory Neuroscience	<p>Usually offered every year.</p> <p>Staff</p>
Biology 100a. Photobiology of Cells and Organelles	<p>Usually offered in odd years.</p> <p>Messrs. Gibbs, Schiff and Staff</p>	Biology 144b. The Neurobiology of Memory	<p>Usually offered in even years.</p> <p>Mr. Lisman</p>
Biology 101a. The Electron Microscope	<p>Usually offered every third year.</p> <p>Mr. DeRosier</p>	Biology 145b. Integrative Neuroscience	<p>Usually offered every third year.</p> <p>Ms. Marder</p>
Physics 152b. Biological Assembly	<p>Usually offered every third year.</p> <p>Mr. Caspar</p>	Chemistry 229b. Introduction to X-ray Structure Diffraction	<p>Usually offered every third year.</p> <p>Mr. Foxman</p>

Chemistry

Objectives

The graduate program in chemistry, comprising course work, seminar participation, and research, is designed to lead to a broad understanding of the subject. The graduate program leads to the M.A. and Ph.D. degrees in chemistry. The Ph.D. is offered with specializations in inorganic, organic, physical and physical-organic chemistry and in chemical physics. (Detailed information on the interdisciplinary specialization in chemical physics is found following listing of chemistry courses). All students will be required to demonstrate knowledge in advanced areas of inorganic, organic and physical chemistry. The doctoral program is designed to be flexible so that individual programs of study may be devised to satisfy the particular interests and needs of each student. In each case this program will be decided by joint consultation between the student and the Departmental Committee of Graduate Studies and the thesis supervisor, when selected. The doctoral program will normally include a basic set of courses in the student's own area of interest, to be supplemented by advanced courses in chemistry and, where appropriate, in biochemistry, biology, mathematics and physics.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to the graduate program in chemistry. In addition, the undergraduate curriculum of applicants should include courses in physics and mathematics (differential and integral calculus), and courses in general, inorganic, analytical, organic and physical chemistry.

Admission to advanced courses will be based upon the results of three qualifying examinations (inorganic, organic and physical chemistry), which will be taken upon entrance. These examinations will determine if the student shall be required to make up deficiencies in preparation. The results of the qualifying examinations will be considered in the assignment of awards for the subsequent years of graduate study and in determining a student's eligibility to continue in a degree program.

Faculty

Professor Peter C. Jordan,
Chair.
Statistical mechanics of membrane transport; electrostatic modeling of ion pores; molecular dynamics; theories of ionic solvation.

Professor Iu-Yam Chan:
Magnetic resonance, coherent phenomena and high resolution optical spectroscopy under high pressure.

Professor Irving R. Epstein:
Experimental and theoretical studies of oscillating chemical reactions and dynamic instabilities; mathematical modeling of biochemical kinetics.

Professor Bruce M. Foxman:
X-ray structure determination; coordination polymers; chemical, physical and crystallographic studies of solid-state reactions; automatic solution of crystal structures using novel computer techniques.

Professor Michael Henchman:
The chemistry of ions in the gas phase; the effect of solvation on reactivity and mechanism; deuterium fractionation in interstellar molecules.

Professor James B. Hendrickson:
Synthesis of natural products; computerization of synthesis design and development of new synthetic reactions.

Professor Philip M. Keehn:
Synthetic methods, organic synthesis of strained rings and theoretically interesting molecules; applications of NMR spectroscopy to organic systems; photooxidation; pure and applied laser chemistry of organic systems; host-guest complexes.

Professor Kenneth Kustin:
Inorganic biochemistry; vanadium and iron in tunicate blood cells and human tissues; fast reactions; oscillating reactions.

Professor Gregory Petsko
(Rosenstiel Center): Protein crystallography.

Professor Myron Rosenblum:
Chemistry of organometallic complexes of the transition elements. New methods in organic synthesis employing organometallic complexes. Electroactive organometallic polymers.

Professor Barry B. Snider,
Graduate Advisor: Synthetic methods; mechanism of synthetically important reactions; total synthesis of natural products.

Professor Colin Steel:
Chemistry of excited molecules and radicals; the kinetics and mechanisms of photochemical and thermal reactions; photophysics and photochemistry of infrared laser-induced reactions.

Professor Robert Stevenson:
Isolation and structure of natural products; compounds of medicinal interest (steroids, terpenoids, lignans, heterocyclics).

Professor Thomas R. Tuttle:
Chemistry of liquid solutions; the composition and structures of species in metal solutions in polar solvents; application of spectroscopy, e.g., magnetic resonance, optical and spectropolarimetry to elucidation of the composition and structure of solutions; theory of chemical species in solution.

Associate Professor Judith Herzfeld:
Nonideality and liquid-crystalline behavior of solutions of self-assembling surfactants and proteins; solid state NMR studies of structure and dynamics in membrane proteins and supporting quantum chemistry.

Associate Professor Dagmar Ringe
(Rosenstiel Center): Protein crystallography.

Assistant Professor James Davis, Jr.:
Inorganic and organometallic chemistry.

Assistant Professor Thomas C. Pochapsky:
Design and synthesis of molecular recognition systems; transient interactions in solution by NMR; NMR of soluble proteins; protein stability and folding by NMR and mutagenesis.

Degree Requirements

Detailed information on the interdisciplinary specialization in chemical physics is found following listing of chemistry courses.

Entering students may be admitted to either the master's or the doctoral program.

All candidates for advanced degrees are required to meet the following requirements:

Qualifying Examination.

Each student is expected to demonstrate a satisfactory knowledge of undergraduate chemistry by the performance in three qualifying examinations; one each in physical chemistry, organic chemistry and inorganic chemistry. These examinations are set twice a year, before the start of each semester. The results of these examinations will be used to determine the student's initial program of course work and will be considered by the Graduate Studies Committee in evaluating the student's progress.

Language Requirements.

Each student is obliged to demonstrate a useful reading knowledge of scientific French, German or Russian within the first two years of residence.

Seminar.

Each student in residence is required to attend and participate in the seminar in his or her chosen area of concentration throughout the period of graduate study.

Teaching.

It is expected that all graduate students will do some undergraduate teaching during the course of their studies.

Placement and Evaluation of Progress.

Recommendations for the course of study in the first year will be based upon the performance on the initial qualifying examinations. Admission to the graduate degree programs will be based on the student's record in course work during the first year and on the performance on the qualifying examinations. Further progress will be evaluated on a yearly basis by the Graduate Studies Committee.

Master of Arts

Program of Study.

Each candidate is required to complete successfully one year of study at the graduate level in chemistry, or, with prior permission of the Graduate Studies Committee, in related fields. The program will include laboratory work and, normally, six semester courses at the graduate level. The detailed program of study will be chosen jointly by the candidate and the Graduate Studies Committee to reflect the candidate's area of interest as well as perspective of other areas.

Residence Requirement.

The minimum residence requirement for the M.A. degree is one year.

Doctor of Philosophy

Program of Study.

A balanced program of study will be prepared by the students and the Graduate Studies Committee. In general, students will be required to take a minimum of seven graduate-level courses, of which two must lie outside the student's field of research. If a student fails to pass a qualifying examination after two attempts, a graduate course has to be taken in that area of chemistry before the end of the second year. A list of courses appropriate for this purpose is available upon request. For students entering with previous graduate experience, up to five courses may be transferred for credit. It is expected that doctoral students will choose a research advisor during the first year, normally in the second semester.

Admission to Candidacy.

A student is recommended for admission to candidacy for the doctoral degree upon certification by his or her thesis advisor and the Graduate Studies Committee that the student has satisfied the qualifying and language examination requirements and has made satisfactory progress in the program of study, research and the final Ph.D. examinations.

Final Examinations.

The graduate student must demonstrate proficiency by taking final examinations in his or her major field: organic, physical-organic, physical or inorganic chemistry. In the organic chemistry program, a cumulative examination procedure is used. Each year, six one-hour examinations (on unannounced topics), and one three-hour examination (on an announced reading) are given. Each one-hour examination passed is worth one unit and each reading examination is worth up to three units depending upon the pass level. The final examination requirement is satisfied by the student having accumulated nine units of which no more than six are from reading examinations. In physical-organic chemistry, final examinations are administered twice a year and are based on assigned readings. Students must pass three of these examinations. In physical chemistry and inorganic chemistry, the student is assigned a set of propositions generally during the third semester of graduate work. In physical chemistry the set consists of three propositions; the student takes a written examination on one proposition and is examined orally on all three. In inorganic chemistry the student is assigned two propositions. He or she takes a written examination on one proposition, and is examined orally on a research proposal (supplied either by the student or faculty) and the remaining proposition. Students in all fields must maintain satisfactory progress by passing these examinations.

Residence Requirements.

The minimum residence requirement for the Ph.D. degree is two years.

Dissertation and Defense.

A dissertation is required which describes the results of an original investigation and which demonstrates the competence of the candidate in independent investigation, critical ability and effectiveness of expression. The student must successfully defend the dissertation at a Final Oral Examination.

Courses of Instruction

Chemistry 110b. Instrumental Analytical Chemistry	Techniques of instrumental chemical analysis. Application of instrumental methods to the separation and analysis of complex mixtures. Instruction on both principles and use of equipment. Students rotate through on-going research laboratories. Data treatment includes computers in the analytical chemistry laboratory. Prerequisite: Satisfactory grade in Chemistry 41a, 41b, 59a, 59b or the equivalent.	Chemistry 133a. Advanced Organic Chemistry: Mechanisms	Principles of the determination of reaction mechanisms. Substituent effects. Mechanisms of nucleophilic and electrophilic substitution reactions. Carbocation chemistry. Mechanisms of addition and elimination. Acidity and basicity.
	Usually offered in odd years.		Usually offered every year.
	Staff		Staff
Chemistry 121a. Inorganic Chemistry I, Lectures	Symmetry and structure; bonding; physical and chemical aspects of the chemistry of the elements. Prerequisite: Satisfactory grade in an undergraduate course in physical chemistry. Three lecture hours a week.	Chemistry 134a. Advanced Organic Chemistry: Synthesis	Systematic design of organic synthesis, including a survey of reactions for construction and functionalization of organic molecules and criteria for their use in synthesis design. Selected total syntheses from the literature will be examined.
	Usually offered every year.		Usually offered every year.
	Mr. Foxman		Mr. Hendrickson
Chemistry 122b. Special Topics in Inorganic Chemistry: Introduction to X-ray Structure Determination	This course will emphasize modern transition metal chemistry: solid state chemistry, coordination compounds, reaction mechanisms, organometallic chemistry, cluster and cage compounds. Prerequisite: Chemistry 121a or equivalent.	Chemistry 137b. The Chemistry of Organic Natural Products	Natural products chemistry will be surveyed within a biogenetic framework. Occurrence, isolation, structure elucidation, biogenesis and synthesis will be covered with an emphasis on modern methods of establishing biogenesis and biogenetic type synthesis. Prerequisite: Satisfactory grade in an undergraduate course in organic chemistry.
	Usually offered every year.		Usually offered every year.
	Staff		Staff
Chemistry 130a. Advanced Organic Chemistry: Structure	Introduction to group theory and its application to molecular orbital theory and spectroscopy.	Chemistry 141a. Advanced Physical Chemistry I	Classical and statistical thermodynamics (laws, tools and applications). Molecular modeling (application of statistical concepts to unimolecular reactions). Elementary photochemical processes. Prerequisite: Familiarity with multivariable calculus.
	Usually offered every year.		Usually offered every year.
	Mr. Rosenblum		Mr. Steel
Chemistry 131a. Advanced Organic Chemistry: Topics in Structure and Reactivity	Stereochemistry, conformational analysis and reactive intermediates. Theory of aromaticity and electrocyclic reactions.	Chemistry 141b. Advanced Physical Chemistry I	Irreversible thermodynamics and chemical kinetics. Entropy production, reciprocal relations, microscopic reversibility and regression of fluctuations. Active transport, relaxation kinetics and oscillating reactions. Solution kinetics including enzyme reactions. Gas kinetics and theories of elementary processes. Microscopic kinetics: energy transfer and collision dynamics. Prerequisite: Satisfactory grade in Chemistry 141a or permission of instructor.
	Usually offered every year.		Usually offered every year.
	Mr. Pochapsky		Mr. Kustin
Chemistry 132b. Advanced Organic Chemistry: Spectroscopy	Application of spectroscopy to the elucidation of structure and stereochemistry of organic compounds with special emphasis on modern NMR methods.		
	Usually offered every year.		
	Mr. Pochapsky		

Chemistry 142a. Advanced Physical Chemistry II	Quantum mechanics: Solutions of the time-dependent Schrodinger equation for particle-in-a-box, simple harmonic oscillator, rigid rotor and the hydrogen atom. Operator techniques and angular momentum. Approximate methods of calculation including time independent perturbation theory and the variational method. Formulation of many particle problems in chemistry. Prerequisite: Satisfactory grade in an undergraduate course in physical chemistry. Usually offered every year. Mr. Tuttle	Chemistry 229b. Special Topics in Inorganic Chemistry: Introduction to X-ray Structure Determination	This course will emphasize modern transition metal chemistry: solid-state chemistry, coordination compounds, reaction mechanisms, organometallic chemistry, cluster and cage compounds. Usually offered every third year. Staff
Chemistry 143a. Advanced Physical Chemistry II	A continuation of 142b. Quantum chemistry; atomic and molecular structure, spectroscopy, chemical binding, advanced perturbation methods, computational methods. Usually offered in even years. Mr. Jordan	Chemistry 231c. Organic Chemistry Seminar	Required of graduate students in organic chemistry, who must audit this course each year. Offered every year. Staff
Chemistry 145b. Special Topics in Chemistry: Non-linear Chemical Dynamics	An introduction to complex dynamical phenomena in chemical systems. After a brief review of important concepts from chemical kinetics, we shall discuss such phenomena as bistability, chemical oscillation, spatial pattern formation and chemical chaos. Applications to other fields such as biology and hydrodynamics will be noted. Usually offered in even years. Staff	Chemistry 232b. Heterocyclic Chemistry	The nature of aromatic heterocycles will be surveyed, followed by detailed discussion of their characteristic reactions and modes of synthesis. The course is organized to show a general predictive framework behind the details. Emphasis is placed on the mechanisms of heterocycle reactions. Usually offered in odd years. Mr. Hendrickson
Chemistry 147b. Application of Group Theoretical Methods to Problems in Chemistry	Finite groups and the theory of representations. Applications in ligand field theory. Full rotation group and angular momentum. Atomic spectra: degeneracies, selection rules and evaluation matrix elements. Molecular quantum mechanics: application of group theory in electronic, vibrational, rotational and magnetic resonance spectroscopy. Usually offered in even years. Staff	Chemistry 234b. Chemistry of Organometallic Compounds	The chemistry of organo-transition metal complexes, including their structures, chemical reactions and their use as reagents in organic synthesis. Prerequisite: Satisfactory grade in Chemistry 130a. Usually offered every third year. Mr. Rosenblum
Chemistry 150c. Special Topics in Chemistry	Usually offered every third year. Staff	Chemistry 235b. Special Topics in Organic Chemistry	The synthesis and properties of non-naturally occurring materials. Focus will be on synthetic strategies and methodologies of preparing small, strained and contorted molecules. The chemical and physical properties of the materials will be discussed in order to shed light on the utility of these compounds in solving fundamental and applied chemical problems. Usually offered every third year. Staff
Chemistry 200d. Advanced Chemistry Laboratory	Usually offered every year. Staff	Chemistry 240c. Physical-Organic Chemistry Seminar	Required of graduate students in physical-organic chemistry, who must audit this course each year. Offered every year. Staff
Chemistry 220c. Inorganic Chemistry Seminar	Required of graduate students in inorganic chemistry, who must audit this course each year. Offered every year. Staff	Chemistry 241c. Physical Chemistry Seminar	Required of graduate students in physical chemistry, who must audit this course each year. Offered every year. Staff

Chemistry 243b. Statistical Thermodynamics	Elementary statistical mechanics of ensembles of molecules and applications to thermodynamic systems. Usually offered every third year. Staff	Chemistry 409d. Inorganic Chemistry	Inorganic biochemistry; vanadium and iron in tunicate blood cells and human tissues; fast reactions; oscillating reactions. Mr. Kustin
Chemistry 245a. Thermodynamics of Ionic Solvation	Experimental methods for determining the thermodynamic quantities pertaining to ionic solvation: solubilities, electrochemical cell potentials, colligative properties. The structures of dilute ionic solutions: Debye-Huckel theories, theories of ionic association, ionic size, single ion solvation energies. Measurements of ionic activity coefficients and of ionic association equilibrium constants. Relationship of the spectroscopic properties of solvated ions to their thermodynamic properties. Determination of single ion quantities. Relationship of the properties of ion-solvent clusters to solvation. Usually offered in even years. Staff	Chemistry 410d. Biophysical Chemistry	Statistical mechanical and optical studies of non-ideality in self-assembling systems, with emphasis on the liquid crystalline behavior of polymerizing proteins and surfactant micelles. Spectroscopic studies of structure and dynamics in biological membranes, with emphasis on solid-state NMR experiments and quantum theory applied to the elucidation of light driven proton transport. Ms. Herzfeld
Chemistry 250c. Chemical Physics Seminar	Required of graduate students in chemical physics, who must audit this course each year. Offered every year. Staff	Chemistry 411d. Physical Chemistry	Chemistry of excited molecules and radicals; the kinetics and mechanisms of photochemical and thermal reactions. Photophysics and photochemistry of infrared laser-induced reactions. Mr. Steel
Chemistry Colloquium Lectures by faculty and invited speakers. Required of all graduate students. Noncredit.		Chemistry 413d. Physical Chemistry	Membrane transport; electrostatic modeling of ion pores; molecular dynamics of ionic motion in biological molecules; theories of ionic solvation. Mr. Jordan
Courses in Research		Chemistry 414d. Physical Chemistry	Kinetic studies of the reactions and properties of ions and solvated ions in the gas phase. Mr. Henschman
Chemistry 401d. Organic Chemistry	Chemistry of natural products; steroids, triterpenoids, bisarylpropanoids, benzofurans. Mr. Stevenson	Chemistry 415d. Physical Chemistry	Experimental and theoretical studies of oscillating chemical reactions and dynamic instabilities; mathematical modeling of biochemical kinetics. Mr. Epstein
Chemistry 403d. Organic Chemistry	Chemistry of organometallic complexes of the transition elements. New methods in organic synthesis employing organometallic complexes. Electroactive organometallic polymers. Mr. Rosenblum	Chemistry 416d. Physical Chemistry	High pressure effects on triplet state molecule; dynamical processes in molecular crystals studied by spin echo under pressure; high resolution optical spectroscopy under pressure; Davydov splittings; electron-phonon coupling. Mr. Chan
Chemistry 404d. Organic Chemistry	Synthesis of natural products; development of new synthetic reactions; computerization of synthesis design systematics. Mr. Hendrickson	Chemistry 417d. Organic Chemistry	Organic synthesis of strained rings and theoretically interesting molecules; synthetic methods; application of nuclear magnetic resonance spectroscopy to organic systems; photooxidation; thermal chemistry; pure and applied laser chemistry of organic systems; enclathration and host-guest complexation in tri-o-thymotide. Mr. Kechn
Chemistry 408d. Physical Chemistry	Experimental and theoretical study of chemical species in solution. Spectroscopic investigations of metal solutions in polar solvents. Mr. Tuttle		

Chemistry 419d. Inorganic Chemistry	X-ray structure determination; coordination polymers; chemical, physical and crystallographic studies of solid-state reactions; automatic solution of crystal structures using novel computer techniques. Mr. Foxman	Chemistry 423d. Organic Chemistry	Multimolecular complexes; amino acid residue side-chain interactions in peptides and proteins by NMR; globular protein stability. Mr. Pochapsky
Chemistry 421d. Organic Chemistry	Synthetic methodology and natural product synthesis. Carbon-carbon bond forming reactions of alkenes and their application to natural product synthesis; intramolecular reactions; oxidative free-radical cyclizations; ketene cycloadditions; ene and Prins reactions; synthesis of biologically active natural products. Mr. Snider		

Chemical Physics

Ph.D. in Chemistry with Specialization in Chemical Physics

The graduate program in chemical physics is an interdisciplinary specialization designed to meet the needs of students who wish to prepare themselves for the study of scientific problems using the methods and theories of modern physics and physical chemistry. This objective is attained by (1) formal course work in chemistry, physics and, possibly, mathematics; (2) participation in relevant graduate seminars; (3) a program of supervised research involving chemical physics; (4) independent study.

The program is designed to be flexible in providing individual programs of study to satisfy the particular interests and needs of each student. Final programs of study and research will be jointly arrived at by the student, his or her research supervisor and the Chemical Physics Committee. Only candidates for the Ph.D. will be accepted.

Admission

The general requirements for admission to the Graduate School apply to candidates for admission to the graduate program in chemical physics. Applicants should have a strong undergraduate background in chemistry, physics and mathematics.

Degree Requirements

No master's degree is offered with specialization in chemical physics, but students who satisfy the appropriate requirements will be eligible for the M.A. degree in chemistry.

All candidates for the Ph.D. degree in chemistry with specialization in chemical physics must meet the following requirements:

Qualifying Examinations.

Each student is expected to demonstrate a satisfactory knowledge of undergraduate chemistry, physics and mathematics by the performance in three qualifying examinations: organic or inorganic chemistry and one each in physical chemistry and in physics/mathematics. These examinations are set twice a year, in August and January. The results of these examinations will determine the student's initial program of course work and will be considered by the Chemical Physics Committee in evaluating the student's progress.

Language Requirements.

Each student is required to demonstrate a useful reading knowledge of scientific French, German or Russian within the first two years of residence.

Seminar.

Each student in residence is required to attend and to participate in the Chemical Physics Seminar. Participation in other seminars in physics and chemistry is also recommended.

Teaching.

It is expected that all graduate students will do some undergraduate teaching during the course of their studies.

Doctor of Philosophy

Program of Study.

It is expected that some candidates for the Ph.D. degree in chemistry with specialization in chemical physics may require a longer period of time in course work than will students in either of the fields of physics or chemistry. In general, the program for the Ph.D. in chemistry with specialization in chemical physics will include eight semester graduate courses: four in physical chemistry, one in either organic or inorganic chemistry and three in physics. No specific course work in mathematics is required, but students are expected to be familiar with the techniques necessary for the proper pursuit of their research. In addition, each student is expected to demonstrate a knowledge of elementary computer programming.

Students may satisfy their program's course requirements in part or in entirety by passing (or giving evidence of ability to pass) the final examination in the appropriate number of such courses. Courses in areas related to chemistry and physics may also be considered by the Chemical Physics Committee in partial fulfillment of the requirements.

Admission to Candidacy.

Students are recommended for admission to candidacy for the doctoral degree upon certification by their thesis advisor and the Chemical Physics Committee that they have satisfied the qualifying and language examination requirements and have made satisfactory progress in the program of study, research and the final Ph.D. examination.

Final Examinations.

Final examinations in chemical physics are generally taken during the third semester of graduate work. The student is assigned a set of three propositions; the student takes a written examination on one proposition and is examined orally on the remaining two.

Residence Requirements.

The minimum residence requirement for the Ph.D. degree is two years.

Dissertation and Defense.

A dissertation is required which describes the results of an original investigation and which demonstrates the competence of the candidate in independent investigation, critical ability and effectiveness of expression. An oral defense of the dissertation will be held.

Cognitive Science

See Psychology

Comparative History

Objectives

The graduate program in comparative European history leads to the degree of Doctor of Philosophy. It trains students to approach the past from a comparative perspective. This method represents the most fruitful way to interpret the past, and the program fosters it in two ways. First, students will develop expertise in two broad fields of history — either medieval and early modern or early modern and modern. Second, they will study their fields from a thematic approach that transcends national boundaries and moves away from conventional periodization.

The comparative history program gives students a broad understanding of the development of Europe and fosters the ability to make cross-cultural comparisons. The thematic approach is central to the process. The Brandeis history faculty is exceptionally diverse in its interests and offers the student a variety of approaches to the past: the study of political structure, economics, the family, social organization, psychohistory, culture and thought. Each student will read widely on two of these subjects and in the process learn what developments were unique and which ones were comparable over time and space. Finally, students will take a non-European field drawn from the Americas, the Near East or the Far East.

The program is designed to prepare students for the competitive academic environment of the next decade. It trains them in methods of historical research and equips them to teach a broad range of subjects. On a deeper level, comparative history fosters intellectual flexibility and interdisciplinary skills that can be creatively employed both inside and outside academia.

A small, select student body will work in close cooperation with the faculty. Most instruction will take place in seminars specifically designed for graduate students or in individual conferences with faculty advisors. From the beginning, the curriculum will help students prepare for their qualifying examinations and guide them toward eventual dissertation research.

During the first year, students must prepare a major research paper on a topic chosen in consultation with a principal advisor. The paper may be comparative in research (involving two or more symmetrical case studies), or it may focus upon a single case (with that research informed by a reading of secondary literature on similar cases). The paper constitutes the major intellectual enterprise of the first year, and students devote one-quarter of their time to it in the first year. The student will also enroll in two introductory graduate colloquia, which cover the early modern and modern periods. During both of their first two years of residence, students must also enroll in the comparative history seminar, which treats significant problems in comparative perspective and introduces students to the methods and issues in comparative history. Students must also enroll in the historiography colloquium (offered alternate years). Finally, before they may take the qualifying examination all students must complete a tutorial or other work focusing on a part of the world geographically or chronologically removed from their principal area of specialization with a view to gaining a comparative perspective on their major research interest.

Students are expected to have a general mastery of two broad fields of history, either medieval and early modern or early modern and modern. Specifically, they must demonstrate a mastery of two thematic fields within their general fields. These thematic fields will normally be chosen from such approaches as cultural, diplomatic, economic, family, intellectual, political and social history. With the approval of the faculty, a student may substitute a methodological field, such as psychohistory, anthropological history or quantitative history for half of one conventional theme. Students may also petition to substitute the medieval period for a portion of the early modern period.

Students should normally plan to complete all work for the doctorate, including the dissertation, within four to five years after entering the program; prolongation of study past the sixth year is discouraged.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this program. Students with a sound preparation in history and who have demonstrated unusual imagination and critical insight will receive special consideration. Undergraduate majors in the other social sciences or in allied fields such as comparative literature may, however, apply. Applicants should submit a sample of written work,

preferably in European history. Only doctoral candidates will be accepted into the regular program. Unusually well-qualified students with distinguished records who wish to obtain a master's degree in modern history before going onto further training in such fields as law, business, diplomacy, social work, journalism or medicine, or who have already earned degrees in these fields, may also be admitted.

Faculty

Professor
Eugene C. Black,
Chair: Modern history.
Political and social
institutions.

Professor
Rudolph Binion:
Modern history.
Culture and thought.
Psychohistory.

Professor
Samuel K. Cohn, Jr.:
Renaissance and early
modern history.

Professor
David H. Fischer:
Modern history. Social
institutions.

Professor
Gregory Freeze:
Russia and Germany.
Social history.

Professor
Morton Keller:
Legal and political
institutions.

Professor
Stephen A. Schuker:
Modern diplomatic,
economic, political
and business history.

Professor
**Bernard
Wasserstein:**
Modern European,
Jewish and Near
Eastern history.

Associate Professor
Lorraine Daston:
History of science.

Associate Professor
Christine Heyrman:
Community, religion
and economic colonial
America.

Associate Professor
William E. Kapelle:
Medieval history.

Associate Professor
Alice Kelikian:
Modern history. Social
institutional history.

Associate Professor
James Kloppenburg:
Intellectual and
cultural history.

Assistant Professor
Paul Gootenberg:
Latin America.
European expansion.
Economic history.

Degree Requirements

Master of Arts

An M.A. degree in history will be awarded to those students who have satisfactorily completed one year of residence as a full time student, completed all their courses and the research paper, fulfilled the first year language requirement and passed a special examination at the master's level. Students who have completed the Ph.D. qualifying examinations and the stated requirements for the master's degree automatically qualify for conferral of the master's degree.

Doctor of Philosophy

Program of Study.

During the first year in the program, students will complete a major research paper and the two colloquia in European history. Within the first two years, they must also take a historiography course and two seminars in comparative history, besides fulfilling the geographical outside-field requirement.

Qualifying Examination.

Normally the student will take the qualifying examination during the fifth semester. Any student who has failed to complete the qualifying examination by the sixth semester will be dropped from the program.

Category.

The student will normally define a dissertation topic in the term preceding the qualifying examination but in no case later than the end of the sixth semester in the program. During

the sixth semester, students will make an oral presentation setting their proposed dissertation topic in comparative perspective; this is called the "category examination." The student will, when feasible, spend the third or fourth year in the program abroad pursuing research for the dissertation. Arrangements can be made for conferences with foreign scholars who can advise on the subject of research.

Language Requirement.

The use of foreign languages is an essential tool for the comparative historian. Each student will be expected to pass, upon admission, one language examination testing the ability to read historical prose with a dictionary. The second language examination must be passed before the end of the student's second year of study. All students must show competence in French and German. Medieval students must also offer Latin. Students may in some instances petition to substitute a language appropriate to their research interests for either French or German.

Admission to Candidacy.

A student may be admitted to candidacy for the Ph.D. degree when he or she has completed the course and residence requirements, demonstrated proficiency in the required foreign languages, passed the qualifying examination and gained approval of his or her dissertation topic by the faculty of the program.

Dissertation Defense.

When the student's dissertation committee accepts the completed dissertation, the candidate must defend it at a final oral examination.

Courses of Instruction

Seminars		Comparative History 321-337a and b.	321a and b. Mr. Binion	330a and b. Mr. Schuker
History 190a. Historiography	A critical analysis of classical historiography.	Readings	322a and b. Mr. Black	332a and b. Mr. Wasserstein
	Usually offered in odd years.		323a and b. Ms. Daston	333a and b. Mr. Cohn
	Mr. Fischer		324a and b. Mr. Fischer	334a and b. Mr. Kapelle
History 200a. Colloquium in Early Modern European History	An introduction to the major issues and methods in the social history of Europe during the early modern and modern periods.		325a and b. Mr. Freeze	335a and b. Ms. Kelikian
	Usually offered every year.		326a and b. Mr. Keller	336a and b. Mr. Kloppenburg
	Mr. Cohn		327a and b. Mr. Schrecker	337a and b. Mr. Gootenberg
Comparative History 200b. Colloquium in European Comparative History Since the Eighteenth Century	Comparative examination of major historical issues in Europe from the 18th through the 20th centuries.		328a and b. Ms. Heyrman	
	Usually offered in even years.		Offered every year.	
	Mr. Schuker			
Comparative History 202b. Seminar in Comparative History: Comparative Revolutions	European revolutions in comparative perspective. Common readings; discussions; individual research; oral and written reports.	Comparative History 401-416d. Dissertation Research	401d. Mr. Binion 402d. Mr. Black 403d. Ms. Daston 404d. Mr. Fischer 405d. Mr. Freeze 406d. Mr. Keller 408d. Ms. Heyrman	410d. Mr. Schuker 412d. Mr. Wasserstein 413d. Mr. Cohn 414d. Mr. Kapelle 415d. Ms. Kelikian 416d. Mr. Kloppenburg
	Usually offered in odd years.		Offered every year.	
	Mr. Black			
Comparative History 203b. Seminar in Comparative History: Death in History	Usually offered every third year.	Comparative History 500. Registration in Time		
	Staff			
In addition the following courses may be taken as equivalent to Comparative History seminars.				
Comparative History 301-317a and b. Research Papers	301a and b. Mr. Binion	310a and b. Mr. Schuker	History 110a. The Civilization of the Early Middle Ages	Usually offered every year. Mr. Kapelle
	302a and b. Mr. Black	312a and b. Mr. Wasserstein	History 110b. The Civilization of the High and Late Middle Ages	Usually offered every third year. Mr. Kapelle
	303a and b. Ms. Daston	313a and b. Mr. Cohn	History 112b. The Crusades and the Expansion of Medieval Europe	Usually offered in odd years. Mr. Kapelle
	304a and b. Mr. Fischer	314a and b. Mr. Kapelle	History 113a. English Medieval History	Usually offered in odd years. Mr. Kapelle
	305a and b. Mr. Freeze	315a and b. Ms. Kelikian	History 123a. The Renaissance	Usually offered every fourth year. Mr. Cohn
	306a and b. Mr. Keller	316a and b. Mr. Kloppenburg		
	308a and b. Ms. Heyrman	317a and b. Mr. Gootenberg		
	Offered every year.			

History 123b. Reformation Europe	Usually offered every third year. Mr. Kaplan	History 135a. The Cultures of Science	Usually offered every third year. Ms. Daston
History 124a. The Revolution of the Saints	Usually offered every third year. Mr. Kaplan	History 137a. Evolution of the International System, 1815-1945	Usually offered in odd years. Mr. Schuker
History 124b. Social and Cultural Transformations: The Origins of Capitalism	Usually offered in even years. Mr. Cohn	History 138a. Economy and Society in Europe, 1750-1900	Usually offered in even years. Ms. Kelikian
History 125a. Europe in the Age of Crisis, 1550-1700	Usually offered in odd years. Mr. Kaplan	History 138b. Industrialization and Social Change, 1900 to the Present	Usually offered every year. Ms. Kelikian
History 126b. Tudor-Stuart England	Usually offered in odd years. Staff	History 139a. Women, Work and Family	Usually offered every year. Ms. Kelikian
History 127b. Early Modern France	Usually offered in odd years. Staff	History 139b. Fascism East and West	Usually offered every third year. Ms. Kelikian
History 128b. Early Modern Culture: Society	Usually offered in even years. Staff	History 141b. Studies in British History: 1830 to the Present	Usually offered in odd years. Mr. Black
History 130a. The French Revolution	Usually offered in even years. Mr. Black	History 142b. Twentieth-Century Europe	Usually offered every third year. Mr. Wasserstein
History 131a. The Scientific Revolution	Usually offered in even years. Ms. Daston	History 144b. Right and Left in Europe from 1900	Usually offered every fourth year. Mr. Wasserstein
History 132a. European Thought and Culture: Marlowe to Mill	Usually offered in even years. Mr. Binion	History 146b. Hitler, Germany and Europe	Usually offered every third year. Mr. Binion
History 132b. European Thought and Culture since Darwin	Usually offered every year. Mr. Binion	History 147a. Rise of Imperial Russia	Usually offered in odd years. Mr. Freeze
History 133a. The Enlightenment	Usually offered alternate years. Ms. Daston	History 147b. Russia Since 1861	Usually offered in odd years. Mr. Freeze
History 134a. Nineteenth-Century Europe: From Revolution to National Unification 1789-1870	Usually offered alternate years. Mr. Black	History 148b. Topics in Imperial Russia	Usually offered every fourth year. Mr. Freeze
History 134b. Nineteenth-Century Europe: Nationalism, Imperialism, Socialism (1870-1914)	Usually offered in even years. Mr. Black	History 149a. Topics in Soviet History	Usually offered in odd years. Mr. Freeze

History 173a. Usually offered in odd years.
The Andean Region
from 1400 to the
Present Mr. Gootenberg

History 174a. Usually offered every third year.
Latin American
Revolutions and the
United States, 1898-
1973 Mr. Gootenberg

History 175a. Usually offered in odd years.
History of Mexico,
1400 to the Present Mr. Gootenberg

History 183b. Usually offered every third year.
The Great Powers
and the Middle East,
1798 to the Present Mr. Wasserstein

History 184a. Usually offered every third year.
Arabs and Jews in
Palestine, 1856-1948 Mr. Wasserstein

History 186a. Usually offered every third year.
The Second World
War Mr. Wasserstein

History 191b. Usually offered in odd years.
Psychohistory Mr. Binion

History 194b. Usually offered in odd years.
Politics and
Diplomacy in
Europe, 1914-1945 Mr. Schuker

Comparative Literature

See Joint Program of Literary Studies

Computer Science

Objectives

Research in computer science at Brandeis is concerned with the fundamental concepts that arise in the development and use of computing systems. This includes the study of theoretical limitations of computational models, understanding of the basic nature of information, the design of algorithms (serial and parallel), the creation and use of computer languages, the development and management of computational systems, and fundamental issues in artificial intelligence.

Various aspects of computer science are closely related to other fields. The theory of information processing and the exploration of the limits of computational structures are topics in pure and applied mathematics. Language structure and translation are of concern in both computer science and linguistics. Artificial intelligence research has many relationships to current research in psychology and biology. Students in computer science and physics share a common interest in solid state devices and computer design. In addition, current data processing technology is having a significant impact on economics and business. Mathematics, cognitive science, biology, physics and economics are among the excellent departments that Brandeis has in these related fields. The rich academic environment that is offered by Brandeis and the Boston area as a whole is conducive for graduate study and research.

Admission

A normal program of study in computer science at Brandeis starts with two years of basic graduate course work. At the completion of this course work and a master's project, students are eligible for a master's degree. During this initial two year period, candidates for the degree of doctor of philosophy complete the qualifying examination and select a thesis topic and advisor. Dissertation research typically requires two to three additional years.

The general requirements for admission to the Graduate School, given in an earlier section of the catalog, apply here. Applicants for admission to the computer science department must submit **three** letters of recommendation and are also required to take the Graduate Record Examination, including the advanced test in computer science. Funds from research grants and fellowships are available to provide financial support for well-qualified students.

Faculty

Professor
Jacques Cohen,
Chair.
Compiler design.
Analysis of parallel
algorithms. Logic
programming. Data
structures.

Professor
David L. Waltz
Artificial intelligence.
Natural language
processing. Vision.
Parallel computational
models.

Adjunct Associate
Professor
Edward Balkovich:
Distributed
computing.

Associate Professor
Max Chretien:
Computer graphics.
Computer science and
education.

Associate Professor
Ira M. Gessel:
Combinatorics.
Number theory.

Associate Professor
James A. Storer:
Parallel computation.
Machine learning.
Robotics. Data
compression. Image
and speech processing.

Assistant Professor
Richard Alterman:
Artificial intelligence.
Natural language
processing, memory-
based reasoning and
common sense
planning.

Assistant Professor
Timothy J. Hickey:
Complexity. Analysis.
Logic programming
and parallel
processing. Symbolic
manipulation.

Assistant Professor
Harry G. Mairson:
Theory. Analysis of
algorithms. Lower
bounds.

Assistant Professor
James Miller:
Parallel processing.
Lisp language.

Assistant Professor
James Pustejovsky:
Artificial intelligence.
Computational
linguistics. Machine
learning.

Lecturer with Rank of
Assistant Professor
Alex T. Prengel:
Computer science
education.

Lecturer
Martin Cohn:
Information theory.
Codes. Sequences.
Data compression.

Instructor
Zhijing G. Mou:
Parallelism.
Programming
languages. Algorithms.

Degree Requirements

Master of Arts

Program of Study. Satisfactory completion of an approved sequence of courses, generally between eight and ten, taken over a period of two years and completion of a master's project.

Doctor of Philosophy

Program of Study. Satisfactory completion of an approved sequence of courses is required. Typically, these are graduate courses taught by the computer science faculty; other courses (such as those taken as part of previous graduate study) may be approved. The course requirement must be completed within the first two years of study (usually four to six courses the first year and two to four courses the second).

Dissertation Committee. The student must obtain the agreement of one computer science faculty member to serve as his or her advisor and dissertation committee chair. The student's advisor then submits a list of committee members for approval at a department meeting.

General Examination. The general examination is an oral examination given by the computer science faculty. Its purpose is to evaluate the student's breadth of knowledge of computer science. Typically, questions will be limited to the material that was covered in courses taken by the student and will emphasize the understanding of basic concepts rather than the memorization of specific details. The general examination must be taken within two years of entering the program.

Research Proposal.

The research proposal consists of a written report together with an oral presentation of the student's proposed area of doctoral research. Contained in the proposal is an outline of related past research in the field (based on a thorough literature search) as well as some preliminary work of the student. The written report must demonstrate satisfactory technical writing skills. The oral presentation must demonstrate satisfactory command of the English language. The research proposal is presented within one year of passing the general examination.

Admission to Candidacy.

To be admitted to candidacy for the Ph.D. degree, the student must satisfactorily complete an approved schedule of courses, demonstrate superior performance in the general examination and have his/her research proposal approved by the department.

Language Requirement.

There is no foreign language requirement for the doctoral degree.

Dissertation and Final Oral Examination.

After completion and tentative approval of the dissertation by the student's dissertation committee, the dissertation will be available for inspection for one month in the department office. Following the viewing period, final approval must be given by the dissertation committee. A public defense is then scheduled. The doctoral degree will be awarded only after the successful defense of the dissertation.

Courses of Instruction

Computer Science 110a. Artificial Intelligence	<p>This course will address artificial intelligence principles and state-of-the-art. Topics included are knowledge representation, knowledge-based systems, reasoning, learning, natural language understanding, machine vision and massively parallel models of cognitions. Selected relevant results from psychology and linguistics will also be considered.</p> <p>Usually offered every year.</p> <p>Mr. Alterman</p>	Computer Science 170a. Information Theory and Cryptology	<p>This course will examine the theory of representing information compactly and securely. The Shannon theory shows the duality between reliability and security. One-way ciphers and public-key systems currently under scrutiny rely on the computational complexity of algorithms. These new approaches will be examined as well as traditional secrecy systems both from the standpoint of the designer and the cryptanalyst.</p> <p>Usually offered every year.</p> <p>Mr. Cohn</p>										
Computer Science 120a. Computer Architecture	<p>The design and analysis of data communication networks are the major emphases of the course. Topics will include protocols, switching, topology and measurement. Examples will be drawn from existing network architecture.</p> <p>Usually offered every year.</p> <p>Mr. Kirsch</p>	Computer Science 170b. Information Theory and Cryptology	<p>See Computer Science 170a for description.</p> <p>Usually offered every year.</p> <p>Mr. Cohn</p>										
Computer Science 140a. Logic Programming	<p>Relationship of Prolog to predicate calculus, horn clauses, unification algorithms, intelligent backtracking, infinite trees, inequalities, implementation issues, concurrent Prolog.</p> <p>Usually offered every year.</p> <p>Mr. Hickey</p>	Computer Science 180a. Algorithms	<p>Basic concepts in the theory of algorithm design and analysis, including: advanced data structures and algorithms, NP and PSPACE parallel algorithms, and specialized topics selected by the instructor.</p> <p>Usually offered every year.</p> <p>Mr. Mairson</p>										
Computer Science 150a. Compiler Design	<p>Covers advanced topics in parser and lexical scanner generation, data flow analysis, code generation and parallel compilation.</p> <p>Usually offered every year.</p> <p>Mr. Hickey</p>	Computer Science 190a. Theory of Computation	<p>A graduate introduction to the theory of computation. Topics covered include formal and automata, undecidability and complexity classes, relativized problems, recursion theory, automatic theorem proving and inductive inference.</p> <p>Usually offered every year.</p> <p>Mr. Mairson</p>										
Computer Science 160a. Parallel and Distributing Computing	<p>An introduction to distributing computing. Basic problems will be described through topics such as mutual exclusion, dining philosophers and cooperation. A list of relevant applications to be discussed include centralized solutions vs. distributed solutions; communication by messages, shared memory models (read-write variables vs. read-only variables and test vs. test-and-set), and message passing systems (types of lines of communication). Parallelism in Simula, PL/I, Algo 168 (semaphores) Monitors, CS, Ada, Scheme are the accompanying language issues handled. In addition, semantic issues such as denotational semantics for parallelism and Synchronous models (e.g., PRAMs and Ultracomputers) will be covered.</p> <p>Usually offered in odd years.</p> <p>Mr. Miller</p>	Computer Science 200-209a and b. Readings	<table><tr><td>200a and b. Mr. Cohen</td><td>205a and b. Mr. Hickey</td></tr><tr><td>201a and b. Mr. Waltz</td><td>206a and b. Mr. Mairson</td></tr><tr><td>202a and b. Mr. Gessel</td><td>207a and b. Mr. Miller</td></tr><tr><td>203a and b. Mr. Storer</td><td>208a and b. Mr. Pustejovsky</td></tr><tr><td>204a and b. Mr. Alterman</td><td>209a and b. Mr. Cohn</td></tr></table>	200a and b. Mr. Cohen	205a and b. Mr. Hickey	201a and b. Mr. Waltz	206a and b. Mr. Mairson	202a and b. Mr. Gessel	207a and b. Mr. Miller	203a and b. Mr. Storer	208a and b. Mr. Pustejovsky	204a and b. Mr. Alterman	209a and b. Mr. Cohn
200a and b. Mr. Cohen	205a and b. Mr. Hickey												
201a and b. Mr. Waltz	206a and b. Mr. Mairson												
202a and b. Mr. Gessel	207a and b. Mr. Miller												
203a and b. Mr. Storer	208a and b. Mr. Pustejovsky												
204a and b. Mr. Alterman	209a and b. Mr. Cohn												
		Computer Science 215a. Advanced Topics in Artificial Intelligence	<p>Topics will vary from year to year. The course may be repeated with the approval of the instructor.</p> <p>Usually offered every year.</p> <p>Mr. Pustejovsky</p>										

Computer Science 215b. Advanced Topics in Artificial Intelligence	See Computer Science 215a for description. Usually offered every year. Mr. Alterman	Computer Science 285a. Advanced Topics in Algorithms and Computational Complexity	Content of course will vary from year to year. Usually offered in even years. Staff
Computer Science 230a. Computational Aspects of VLSI	The course is primarily concerned with the theoretical issues involved with the design and layout of VLSI circuits; however, many practical issues will be addressed along the way. In particular, students will be required to design a small nMOS chip. Topics covered include: circuit layout, resource trade-offs and limits to computations, parallel computation, computation networks, systolic arrays, VLSI design tools, "silicon compilation," and concepts motivated by future technology (e.g., 3D circuits, wafer-scale integration, optical circuits, etc.). Usually offered in even years. Mr. Storer	Computer Science 300a.b. Master's Project	Offered every year. Staff
Computer Science 240a. Semantics of Programming Languages	Mathematical description of basic concepts of programming languages. Modeling using the lambda-calculus. Derivation of compilers from formal descriptions of languages. Usually offered in even years. Mr. Storer	Computer Science 310d. Seminar in Artificial Intelligence	Usually offered in even years. Staff
		Computer Science 340a. Seminar in Programming Languages	Usually offered in even years. Staff
		Computer Science 390d. Seminar in Theory of Computation	Usually offered in even years. Staff
		Computer Science 400-409d. Dissertation Research	400d. Mr. Cohen 401d. Mr. Waltz 403d. Mr. Gessel 404d. Mr. Storer 405d. Mr. Alterman 406d. Mr. Hickey 407d. Mr. Mairson 408d. Mr. Miller 409d. Mr. Pustejovsky

Cross-Registration at Boston College, Boston University and Tufts University

A full-time graduate student at Brandeis University may enroll in one graduate course each term at Boston College, Boston University or Tufts University. Brochures suggesting courses for cross-registration at each of the host institutions are available at the graduate school office of each institution.

A student who wishes to enroll in a course at one of these institutions should consult with the instructor in the particular course and should expect to satisfy the prerequisites and requirements normally required for admission to the course, including adherence to the academic calendar of that course.

A student at Brandeis University who wishes to enroll in a graduate course at one of the host institutions should obtain a registration permit from the Graduate School Registrar and should present this permit to the Graduate School Registrar of the host institution.

Economics

See International Economics and Finance

English and American Literature

Objective

The graduate program in English and American literature is designed to offer training in the interpretation and evaluation of literary texts with some attention to related scholarly disciplines. It also offers candidates who have some ability in creative writing an opportunity to pursue this interest as a normal part of the graduate program.

Admission

Candidates for admission should have a bachelor's degree, preferably with a major in English and American literature, and a reading knowledge of French, Italian, German, Greek or Latin. They should submit **two** samples of written work: one **must** be a critical essay on British or American literature; one **may** be fiction or poetry. The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to this area of study.

Faculty

Professor
Eugene Goodheart,
Chair:
Criticism. Nineteenth- and twentieth-century literature and thought.

Professor
Michael T. Gilmore:
Puritanism. Literature of the American Revolution. American Renaissance.

Professor
Allen Grossman:
Poetry and poetic structures. Seventeenth-century literature. Modern and contemporary literature.

Professor
Susan Staves:
Restoration and eighteenth century.

Professor
Peter Swiggart:
American literature. Critical theory.

Visiting Fannie Hurst
Professor
Alan Shapiro:
Poetry.

Visiting Fannie Hurst
Professor
Richard Weisberg:
Law and literature.

Associate Professor
John Burt:
American literature. Romanticism.

Associate Professor
Karen W. Klein:
Medieval literature. Women's studies.

Associate Professor
Alan Levitan,
Director of Graduate Studies: Shakespeare. Music and drama. Oriental drama.

Associate Professor
Richard J. Onorato:
Modern literature. Film.

Associate Professor
Gary Taylor:
Renaissance literature.

Visiting Fannie Hurst
Associate Professor
Judith Grossman:
Fiction.

Assistant Professor
Mary Campbell:
Medieval literature. Poetry.

Assistant Professor
William Flesch:
Renaissance. Romanticism. Theory.

Assistant Professor
Phillip Harper:
Twentieth-century literature. Afro-American literature.

Visiting Assistant Professor
Clement Hawes:
Eighteenth-century literature.

Assistant Professor
Anne Janowitz:
Romantic and modern poetry. Film.

Assistant Professor
Helena Michie:
Victorian literature. Women's studies. Literary theory.

Assistant Professor
Paul Morrison:
Renaissance, Romantic and Modern poetry. Literary theory.

Lecturer
Frederick Wegener:
Nineteenth-century literature.

Poet-in-Residence
Frank Bidart:
Poetry.

Writer-in-Residence
Geoffrey Wolff:
Fiction.

Degree Requirements

Following are the degree requirements for the Department of English and American Literature. Students should also consult the General Degree Requirements and Academic Regulations found in an earlier section of this catalog.

Master of Arts

Program of Study. First-year students are normally expected to take 100-level courses and graduate seminars in the English department, not independent study courses. Each student will take English 200a; in addition, a normal program will consist of five courses, at least three of which will be 200-level seminars. Students must also register for English 295b (Major Text Examination).

Residence Requirement. The minimum residence requirement is one year, though students with inadequate preparation may require more.

Language Requirement. A reading knowledge of a major foreign language (modern European, ancient Greek, Biblical Hebrew or Latin) must be demonstrated by passing a written translation examination. The completion of the language requirement at another university does not exempt the student from the Brandeis requirement.

Qualifying Examination. An examination, oral and written, will be given by committees of faculty members at the beginning of the spring term on one of several major texts, the texts to be announced at the end of the fall term. This examination will test a student's ability to read and understand a major literary work or a group of short works by the same author. Admission to the Ph.D. program, in addition to qualification for the M.A. degree, will depend upon the results of this examination and upon the student's performance in courses.

Doctor of Philosophy

Admission to the Ph.D. Program. (1) Students who complete, with distinction, the M.A. requirements at Brandeis University are admitted to the Ph.D. program by the department upon recommendation of the Committee on Graduate Studies.

(2) Students who enter with a master's degree or a full year of graduate work in English from another university are required to fulfill the qualifying examination requirement described above under the Master of Arts Program. Provided this requirement is fulfilled, such students may, at the department's discretion, be admitted to the Ph.D. program after successful completion of a year at Brandeis and upon recommendation by the Committee on Graduate Studies. At the time of admission, up to a year's residence and course credit for work completed elsewhere may be granted.

Program of Study.

Second-year students continue to take courses, usually two per semester. Students have an obligation to review their preparation in the field with their advisors and to ensure that they are acquiring both a comprehensive knowledge of the various historical periods and genres of English and American literature and a deeper knowledge of the particular period or field they propose to offer as a specialty. With the exception of English 200, no specific courses are required of all Brandeis Ph.D. candidates; each student's program will be designed in light of the strengths and weaknesses of his or her previous preparation and in accord with his or her own interests. A student who comes to Brandeis with a B.A. is required to take 12 courses for the Ph.D.; a student who comes with an M.A. is normally required to take eight courses at Brandeis.

Dissertation Field Examination.

All candidates for the Ph.D. will be asked to pass an oral examination in the historical period or genre in which the candidate expects to write a dissertation. This examination is taken in the third year. The examination may be taken as many times as necessary without prejudice to a student's standing in the Ph.D. program.

Residence Requirement.

The minimum residence requirement is one year beyond the master's degree or two years beyond the bachelor's.

Other Requirements.

Language Requirement.

In addition to the language requirement that has been met for admission to the Ph.D. program, the student must (1) demonstrate a reading knowledge of a second major foreign language; or (2) demonstrate an advanced competence in the first foreign language and a knowledge of its literature; or (3) take a graduate course, ordinarily a seminar, in a field closely related to research on the dissertation. Approval of the graduate committee must be sought before such a course is taken; the student must demonstrate the relevance of the proposed course to the dissertation.

Training in Teaching.

Provided openings exist, students in their second, third and fourth year in the program can expect to be awarded at least one teaching assistantship each year, provided their academic work is of high caliber.

Admission to Candidacy.

A student will be recommended by the department for admission to candidacy for the Ph.D. degree after completing with distinction the program of study and satisfying all departmental requirements prior to the writing and defense of a dissertation. A student admitted to candidacy must have submitted a formal dissertation proposal, subject to approval by the student's dissertation director and by an additional member of the departmental faculty.

Dissertation and Defense.

Each student will submit a dissertation in a form approved by his or her dissertation director and by a committee appointed by the Director of Graduate Studies. The student will defend the dissertation at a final oral examination. The dissertation may be a monograph, a series of closely related essays, a bibliographical project or a textual project.

Courses of Instruction

English 106a. Early American Bestsellers	A study of some of the most popular American books written before the Civil War. Among other topics, we will explore the changing preferences of the reading public; the relation between popular and "elite" taste; and the cultural function of the bestseller. Works considered will include Benjamin Franklin's <i>Autobiography</i> ; Susanna Rowson's <i>Charlotte Temple</i> ; Hannah Foster's <i>The Coquette</i> ; Washington Irving's <i>The Sketch-Book</i> ; James Fenimore Cooper's <i>The Spy</i> ; and Harriet Beecher Stowe's <i>Uncle Tom's Cabin</i> .	English 110b. Film Narrative II: Contemporary Film	<i>Signature of instructor required.</i> The course requires competence in basic matters of film technique and assumes adequate knowledge of earlier film. The films for study will be drawn from the contemporary period — from the late 1950s to the present. In analyzing and discussing contemporary film, special attention will be given to those that assume a film-literate and generally-knowledgeable audience and to the cultural and political significance of the narrative mode and of the film medium.
	Usually offered in odd years.		Usually offered in even years.
	Mr. Gilmore		Mr. Onorato
English 109a. Directed Writing: Poetry	<i>Admission by consent of instructor on the basis of a short manuscript of poems (3-5 pages) submitted prior to the first class meeting.</i> This workshop will be devoted to the reading and writing of poetry. Assignments will include readings from the <i>Norton Anthology of Poetry</i> and the writing of a number of original poems in a variety of traditional and experimental forms and meters.	Comparative Literature 107b. European Modernism and Its Inheritance	A study of the principal forms and styles of the European avant-garde in the first half of this century, understood as a series of efforts to reflect and explore the implications of an emerging and radically new model of human consciousness. Painters viewed will include Picasso, Duchamp and Ernst; readings from Joyce, Rimbaud, Rilke, Apollinaire, Landolfi, Stein, Montale and William Carlos Williams.
	Usually offered every year.		Usually offered in odd years.
	Mr. Shapiro		Mr. Engelberg
English 109b. Directed Writing: Short Fiction	<i>Signature of instructor required.</i> Each student will complete a story every second week during the term. Those stories will be copied and distributed to fellow students before each class meeting. Students' stories, as well as exemplary published short stories, will provide the occasions for textual criticism in class. Students will be selected after the submission of sample writing, preferably but not necessarily fiction. The deadline for submission of application manuscripts to the English department office is the day prior to the first day of instruction.	English 115b. Women, Realism and Melodrama	This course focuses on two frequently opposed traditions in 19th-century British literature — realism and melodrama — and at the tensions between them embodied in novels, plays and paintings of the period. We will also be looking closely at the linked figures of the actress and the heroine as they come to represent the two traditions. Texts for the course will include theatrical novels like George Eliot's <i>Daniel Deronda</i> , M.E. Braddon's <i>Lady Audley's Secret</i> and Charlotte Brontë's <i>Villette</i> as well as melodramatic adaptations of these and other novels.
	Usually offered every year.		Usually offered every third year.
	Mr. Wolff		Ms. Michie
English 110a. Film Narrative I: Film Classics	<i>Signature of instructor required.</i> The primary object of this course is film literacy, not film history — an understanding and critical appreciation of film as a major modern form of narrative. To that end, film will be studied in all its technical complexity as a wholly modern kind of text. A survey approach, however, will be adopted, beginning with early landmark films in which different aspects of film technique were being developed and following chronologically with some of the classics of the first half century of narrative film through the 1950s. It is a course for those who enjoy film and are prepared for the serious undertaking of studying it.	English 116b. Eighteenth and Nineteenth Century Afro-American Literature	This course will address the history of Afro-American literature from its mid-18th-century beginnings through the post-Civil War Reconstruction of the late 19th century. We will examine transcriptions of oral folk productions, slave narratives, autobiography, essays, poetry and prose fiction in order to trace the rapid development of Afro-American literary culture from a primarily oral tradition.
	Usually offered in even years.		Usually offered in odd years.
	Mr. Onorato		Mr. Harper

JCS 117b. Modern Jewish American Writers	See JCS 117b for description. Usually offered in odd years. Ms. Fishman	English 122a. The Medieval World: Britain before the Conquest	An introduction to the language and literature of the Anglo-Saxons. Readings will include selections from Bede, The Chronicle ; charms, riddles, the major extant short poems and the epic poem Beowulf . Usually offered every year. Ms. Klein
English 119a. Directed Writing: Fiction	<i>Signature of instructor required.</i> A workshop for writers. Those wishing to enroll should submit a sample of their fiction writing at least one day before the first class meeting. The instructor will be available for consultation at that time. Usually offered every year. Ms. Crossman	English 122b. The Medieval World: England from the Conquest to the Renaissance	A cultural study of this period with particular attention to the idealized fantasies, centering on the figure of Arthur, of the aristocratic class; the yoking of literary energies to intense religiosity; and the emergence of a literature reflective of wider urban and social realities. Readings will be drawn from history, Romance, lyric, drama and the poetry of Chaucer. No prior knowledge of Middle English is required, although the Anglo-Saxon course (English 122a) is helpful for a sense of the changing traditions of medieval literature. Usually offered every year. Ms. Klein
English 119b. Directed Writing: Poetry	<i>Signature of instructor required.</i> A workshop for poets. Admission by consent of the instructor on the basis of a short manuscript of poems submitted prior to the first class meeting. Usually offered every year. Mr. Bidart	English 125a. Romanticism I: Blake, Wordsworth and Coleridge	We will read the major poetry and some prose by the first generation of English Romantic poets. Our purpose is both to define the common ground of the Romantics' poetic, philosophical and political goals, and to determine the singularity of each writer's achievement. Topics we will address include: Romantic genres, the relationship between the "visual" and the "visionary," Romantic Orientalism and Medievalism, and the impact of the French Revolution. (In alternate years, ENG 135 will include the poets listed above and Byron, Shelley and Keats.) Usually offered in even years. Ms. Janowitz
English 120a. Prose Fiction and Film Fiction	<i>Signature of instructor required.</i> In this course, the respective narrative techniques of prose fiction and film fiction will be compared. An analytical and critical ability based on the prior study in course work of prose fiction will be assumed, and greater emphasis will be placed on how point-of-view, characterization, setting, narrative exposition and style are achieved through film technique. A useful text on the basic elements of film technique will be required reading. Some examples of successful and unsuccessful adaptations of novels as films will be used for explicit comparisons, drawing upon well-known works of fiction; others will require the reading of about three novels. Some of the films will be ones that were written directly for the screen or loosely "based on" a prior work. Films will be seen in one viewing before class and then discussed and analyzed in class during a second viewing. Usually offered in odd years. Mr. Onorato	English 125b. Romanticism II: Byron, Shelley and Keats	Often considered the "younger generation" of Romantic poets, Byron, Shelley and Keats both continue and react against the poetic, political and philosophical preoccupations and positions of their immediate elders. We will read the major poetry and some prose by Byron, Shelley and Keats, as well as Mary Shelley's Frankenstein . Topics will include: The Byronic Hero, Shelley and the ideology of Free Love, the impact of the figure of Napoleon, Keats' Romantic Medievalism. Usually offered in even years. Ms. Janowitz
English 121b. Introduction to Critical Theory	A consideration of some recent and influential representative texts about textual representation, this course will consider formalist, psychoanalytic, structuralist, deconstructive, feminist and marxist approaches to reading literature, their interferences and their possible articulations. We will concern ourselves on the whole with short but important essays by writers such as Marx, Freud, Benjamin, Levi-Strauss, Barthes, Lacan, Foucault, Derrida, Irigaray, de Man and Bloom; on short but important works or excerpts by such people as Sophocles, Shelley, Poe, Kafka and Duras. Usually offered in odd years. Mr. Flesch		

<p>English 126a. American Realism and Naturalism 1865-1900</p>	<p>The principal concern of this course will be how some of the central American Realists and Naturalists set about representing and analyzing American social and political life. Topics of discussion will include: the changing status of individuals, classes and genders; the relations between the individual and the natural and social determinants of personal destiny; ideas concerning the nature and texture of personal experience. Authors will include James, Twain, Howells, Crane, Wharton, Dreiser, Chopin, Frederic, Norris, Sinclair.</p> <p>Usually offered every third year.</p> <p>Mr. Swiggart</p>	<p>English 131b. Writing in the "Wild Zone": Charting Feminist Literary Theory</p>	<p>Feminism is accused of having no basis in theory. While some feminists see the enabling possibilities of transcending traditional notions of "discipline," others are in the process of defining for feminism a theoretical territory on the margins of patriarchal culture. This course looks at the contributions of various theories to the feminist project, and examines, in turn, what feminism can suggest to Marxists, Freudians, deconstructionists and others. We will be using both "primary" and "secondary" sources including works by Rich, Gallop, Spivak, Gilbert and Gubar, and Daly.</p> <p>Usually offered in even years.</p> <p>Ms. Michie</p>
<p>English 127a. Joyce and Lawrence</p>	<p>A study of the major work of the two great antithetic novelists of the modern period. Readings will include: <i>Dubliners</i>, <i>Portrait of the Artist</i>, <i>Ulysses</i>, <i>Sons and Lovers</i>, <i>The Rainbow</i> and <i>Women in Love</i>.</p> <p>Usually offered every year.</p> <p>Mr. Goodheart</p>	<p>English 132b. Chaucer I</p>	<p>In addition to reading Chaucer's major works, we will pay special attention to situating them in relation to linguistic, literary and social developments of the later Middle Ages. No previous knowledge of Middle English required. <i>Troilus and Criseyde</i>; selections from <i>Canterbury Tales</i> and <i>Romance of the Rose</i>; brief additional readings in Continental and English texts from Chr�tien to Shakespeare.</p> <p>Usually offered every fourth year.</p> <p>Ms. Campbell</p>
<p>English 127b. Contemporary Fiction and the "Post-Modernist" Novel</p>	<p>Against the background of the "modernism" of the earlier 20th century, this course will consider aspects of contemporary fiction, such as the assimilation of earlier experimental techniques, the further liberalization of subject matter and attempts at continuing avant-gardism in what is called the "postmodernist" novel. Works to be read will be chosen from among: Nabokov, Borges, Lessing, Bellow, Mailer, Doctorow, Oates, Roth, Pynchon, Barth, Fowles, Hawkes, Robbe-Grillet, DiLillo, Calvino, Morrison, Atwood, Tyler and Kundera.</p> <p>Usually offered every year.</p> <p>Mr. Onorato</p>	<p>English 133a. Advanced Shakespeare</p>	<p>An intensive analysis of a small number of Shakespeare's plays.</p> <p>Usually offered every third year.</p> <p>Staff</p>
<p>English 128b. The Modernist Revolution</p>	<p>A course in the literary revolution that created what we know as "modern literature," with an emphasis on the works of Yeats, Eliot, Pound, Frost, Williams and Stevens. We will look at major statements about the nature of poetry by these poets, as well as their major poems.</p> <p>Usually offered in odd years.</p> <p>Mr. Bidart</p>	<p>English 135b. Romanticism</p>	<p>Major poetic texts by Blake, Wordsworth, Coleridge, Keats, Shelley and Byron, with some attention to their prose, and to Dorothy Wordsworth's <i>Journals</i> and Mary Shelley's <i>Frankenstein</i>. Our purpose is both to define the common ground of the Romantics' poetic, political and philosophic goals, and to determine the singularity of each writer's achievement. Topics we will address include: Romantic genres, the "Romantic Woman," Romantic Medievalism and Orientalism, and the relationships between the "visionary" and the "visual."</p> <p>Usually offered every other year.</p> <p>Ms. Janowitz</p>

English 137a. Yeats, Rilke, Freud	<p>An intensive reading of two modern poets in light of the Freudian description of mind. The intent of the course is to read the account of the person which is sponsored by Yeats and Rilke (the poetic account of the person) as in contention with the psychoanalytic account of the mind, and to assess the meaning and utility of Freudian knowledge as a supplement to poetic knowledge.</p> <p>This course will attend with particular care to Freud's theory of dreams and its relationship to the use and value of dreams in the practice of poets. Yeats' poems will be read through, as well as his narrative and psychological writings. In the work of Rilke the course will focus on the <i>New Poems</i>, the <i>Elegies</i> and the <i>Sonnets to Orpheus</i>, as well as to the letters and the <i>Notebooks</i> of Malte Laurids Brigge.</p> <p>Usually offered every fourth year.</p> <p>Mr. Grossman</p>	English 145b. Victorian Poetry and Poetics	<p>This course will examine major 19th-century poetic texts in the context of the social, religious, class, scientific, urban and sexual crises of the Victorian period. Focus on works by Tennyson, the Brownings, Arnold, Clough, the pre-Raphaelites, Hopkins. Topics will include Victorian Medievalism and Hellenism, poetic texture and form, relations between poetry and painting, class and gender in narrative poems, "voice" in the Victorian lyric.</p> <p>Usually offered in even years.</p> <p>Ms. Janowitz</p>
English 138a. Fiction and Social Change	<p>What is the relationship between fiction and social change? We will read and discuss major works of fiction in both the English and American traditions that deal with social mobility, race and colonialism, industrialization, marriage and class. We will explore the cultural similarities and differences reflected in the works drawn from the two traditions. Texts will include: Austen, <i>Pride and Prejudice</i>; Dickens, <i>Great Expectations</i>; Twain, <i>A Connecticut Yankee in King Arthur's Court</i>; James, <i>Washington Square</i>; and Fitzgerald, <i>The Great Gatsby</i>.</p> <p>Usually offered every fourth year.</p> <p>Messrs. Gilmore and Goodheart</p>	English 147b. Modern British and American Drama	<p>The emphasis in this course will be upon the American Realistic tradition — including O'Neill, Williams, Albee, Miller and Shepard — but comparisons will be made to Pinter, Stoppard and other contemporary British dramatists.</p> <p>Usually offered every fourth year.</p> <p>Mr. Swiggart</p>
English 142b. Chaucer II: "Love" and the Early Chaucer	<p>In this course we will read Chaucer's dream poems — <i>The Booke of the Duchesse</i>, <i>The House of Fame</i>, <i>The Parliament of Fowls</i> — as well as his "verse novel," <i>Troilus and Criseyde</i>. Particular attention will be paid to Chaucer's innovative uses of Love as both a topic and a formal structuring device for the analysis of social conflict. No previous knowledge of Middle English required.</p> <p>Usually offered every third year.</p> <p>Ms. Campbell</p>	English 152b. Arthurian Literature	<p>A survey of (mostly) medieval treatments of the legendary material associated with the British king Arthur and his court, in several genres: bardic poetry, history, romance, prose narrative. The Welsh <i>Mabinogian</i>, Geoffrey of Monmouth's <i>History of the Kings of Britain</i>, <i>Cawaine and the Green Knight</i>, selected books from Malory's <i>Morte d'Arthur</i>, Book I of Spenser's <i>Faerie Queene</i>, Monty Python's <i>Holy Grail</i>. We will also read selections from Chrétien de Troyes' romances and the French prose <i>Lancelot</i>, but the major emphasis will be on the Arthurian material as national British myth and mystique. All works will be read in translation.</p> <p>Usually offered in odd years.</p> <p>Ms. Campbell</p>
English 143a. Elizabethan and Jacobean Drama	<p>A study of the Revenge tradition in the work of Shakespeare and his contemporaries. The problem of blood revenge will be looked at as an historical phenomenon in Renaissance society and as a social threat transformed into art in such dramatists as Shakespeare, Marlowe, Kyd, Marston, Tourneur, Chapman and Webster.</p> <p>Usually offered every year.</p> <p>Mr. Levitan</p>	English 153a. Poetry, Philosophy and Politics in the Seventeenth Century	<p>The period from the first production of Shakespeare to the Glorious Revolution saw enormous changes in the way people in England reflected upon what it meant to be human, and on what it meant to be English; these changes were mirrored in the literature, politics and philosophical writings of the time. We will attempt to chart and correlate some of these changes, looking at debates in prose, but also in poetry, between Puritans and Cavaliers, and at the philosophical instigators and/or consequences of these debates. Readings might include Donne, Herbert, Milton, Bacon, Hobbes and Bunyan; possible examination of some radical tracts and their revilers.</p> <p>Usually offered in even years.</p> <p>Mr. Flesch</p>

English 153b. Milton	<p>This course contemplates Milton primarily as the author of <i>Paradise Lost</i>. We will also read Milton's other major works <i>Lycidas</i>, <i>Paradise Regained</i>, <i>Samson Agonistes</i> as well as some of his shorter poems and some selections from his prose, in order to try to understand his stake, both political and poetic, in his own writing.</p> <p>Usually offered in even years.</p> <p>Mr. Flesch</p>	English 165a. Character and Society in the Nineteenth Century	<p>A study of the "social thought" of major novelists as it reveals itself in characterization, narrative strategy and narrative voice. The class will be conducted as a discussion in which students will be expected to make periodic presentations. The reading list may change from year to year. Among the novelists we will read are Jane Austen, Emily Brontë, George Eliot, Thomas Hardy.</p> <p>Usually offered in even years.</p> <p>Mr. Goodheart</p>
English 155a. Jane Austen, Charlotte Brontë and George Eliot	<p>This course will provide an opportunity for intensive study of novels by these three major writers. The course will also deal with some biographical and critical material. Some questions to be raised: What, if anything, did these writers learn from previous literary experiments and from each other? Do these novels begin to constitute a female tradition? What did each of them contribute to the theory and practice of realism? How did each of them see landscape, geography, social and sexual relations, politics, narrative? Why are these three women among the few to be canonized?</p> <p>Usually offered in odd years.</p> <p>Ms. Michie</p>	English 173a. Spenser and Milton	<p>A course on poetic authority: the poetry of authority and the authority of poetry. Spenser and Milton will be treated individually, but the era they bound will be examined in terms of the tensions within and between their works. Readings will include <i>Epithalamion</i>, the whole of <i>The Faerie Queene</i>, parts of <i>The Shepheardes Calendar</i> and <i>Astrophell</i> by Spenser; and <i>Paradise Lost</i>, <i>Paradise Regained</i>, <i>Samson Agonistes</i>, <i>Areopagitica</i> and <i>Eikonoklastes</i> by Milton.</p> <p>Usually offered in odd years.</p> <p>Mr. Flesch</p>
English 157a. The Post-Modern Generation: Contemporary Poetry	<p>An introduction to recent poetry in English, dealing with a wide range of poets as well as striking and significant departures from the poetry of the past. We will look, where possible, at individual volumes by each author — the list will probably include Robert Lowell, Elizabeth Bishop, Allen Ginsberg, Frank O'Hara, John Ashbery, Sylvia Plath, Adrienne Rich, James Merrill, Allen Grossman, Seamus Heaney, Louise Glück, Robert Pinsky and Michael Palmer.</p> <p>Usually offered every year.</p> <p>Mr. Bidart</p>	Comparative Literature 174a. Sex, Class and Literature in Europe: 1830-1914	<p>Usually offered in odd years.</p> <p>Ms. Harth</p>
English 163a. Renaissance Poetry	<p>In this course we will be concerned primarily with the kind of lyric first written by Wyatt, and evolved and extended by Sidney, Spenser and Shakespeare (particularly the sonnets); and with its sometimes surprising elaborations in the work of 17th-century poets, mainly Donne, Herbert, Milton and Marvell.</p> <p>Usually offered in even years.</p> <p>Mr. Flesch</p>	English 174b. Eighteenth-Century Novel	<p>Early developments in English fiction with some attention to theories of narrative and problems in the practical criticism of the novel. Emphasis on Defoe, Richardson, Fielding, Sterne and Austen.</p> <p>Usually offered every year.</p> <p>Staff</p>
English 164b. Restoration and Eighteenth-Century Drama	<p>Comedy, heroic drama and tragedy between 1660 and 1800. This course will devote some attention to the history of the plays in performance. Authors to be studied include Dryden, Etherege, Wycherley, Otway, Congreve, Vanbrugh, Lillo, Garrick, Goldsmith and Sheridan.</p> <p>Usually offered in odd years.</p> <p>Ms. Staves</p>	English 176a. American Gothic and American Romance	<p>This course examines gothic fiction as a method of exploring the capacities of the imagination, disclosing its power and meeting its threat. We will begin with the 19th-century founders of the genre in America: Brown, Poe, Hawthorne, Melville and James. The second half of the course will deal with some 20th-century masters: Faulkner, Warren, O'Connor, Oates and McCarthy.</p> <p>Usually offered in even years.</p> <p>Mr. Burt</p>

English 176b. Hawthorne, Melville and Poe	Readings will include <i>Moby Dick</i> , <i>The Narrative of Arthur Gordon Pym</i> , <i>The Scarlet Letter</i> and <i>The Marble Faun</i> , as well as short novels by all three authors. Usually offered every fourth year. Mr. Swiggart	English 197b. The Political Novel in the Twentieth Century	Defining politics as strategies of power, we will look at these strategies in sexual, racial, economic and ideological terms as they are represented in primarily British and American novels of the 20th century. Beginning with the works of Conrad and Kafka, whose interests and explorations opened the novel to overtly political themes, we will select novels from among the following authors: Orwell, Koestler, Lessing, Gordimer, Coetzee, Naipaul, Walker, Doctorow, Kundera, Grass, Vargas-Llosa, Achebe, Fuentes, Silko, Morrison. We will focus on literary responses to various political and economic systems and on the literary depictions of the body in public and institutional spaces, such as prisons and hospitals, rather than private and domestic spaces, the more usual loci for narrative. Close examination of texts will be done in the context of theoretical frameworks, both Freudian and feminist, with special emphasis on Kundera. Usually offered in odd years. Ms. Klein
English 177b. Contemporary Writers	In this course we will study writers whose major work has been done after the Second World War. Each text will be looked at in the literary context of the postmodern novel, the political context of emerging voices of women and minorities, and the social context of mass media, which are predominantly visual. Particular attention will be given to gender in the creation of character, in authorial voice and in the implications for literary theory. This course will be taught with a dialogue lecture and an open discussion session per week. Novelists studied will be selected from Lessing, Gordimer, Atwood, Morrison, Oates, Bellows, Hawkes, Pynchon, Roth, Mailer, Kundera, Calvino. Usually offered in odd years. Ms. Klein and Mr. Onorato	Linguistics 140a. History of the English Language	Usually offered in even years. Ms. Maling
English 178a. Family Portraits: The Orphaned Self	See Comparative Literature 164a for description. Usually offered in odd years. Mr. Engelberg	Seminars	
English 180a. The Modern American Short Story	<i>Signature of instructor required.</i> We will lavish close study on American short fiction masterworks. We will read as writers write, discussing solutions to narrative obstacles, examining the consequences of alternate points of view; we will study words and syntax to understand and articulate how technical decisions have moral and emotional weight. Usually offered every year. Mr. Wolff	English 200a. Methods of Literary Study	This seminar will serve as an introduction to graduate studies. It will center upon one play by Shakespeare, viewed through a variety of prisms that will be useful for graduate pursuits in a much wider sphere of area-disciplines. The course will begin with a consideration of the nature of a play-text, both in the theater and on the printed page — what we know and don't know about authorial intent, how the exigencies of Renaissance printing-practice affect editorial and interpretative decisions and what not to assume when reading a modern edition of a Shakespeare text. We will then apply several recent theoretical approaches to literature to the particular play at hand, touching at least upon feminism, Marxism, psychoanalytic criticism, the new historicism and poststructuralism in an attempt to determine their virtues and limitations as illuminators of a Shakespearean text. Secondary reading will include both bibliographical and critical books and articles. Required of all first-year students. Usually offered every year. Mr. Levitan
Comparative Literature 185a. Dickens and Dostoevsky	Usually offered in even years. Ms. Miller		
English 187a. The "Modernist" Novel in English	A course in the major novelists of the early 20th-century, stressing their experiments with narrative technique, subject matter and prose that resulted in the distinctly 20th century sense of the modern in fiction known generally as "Modernism." Authors to be read will be chosen from among: Conrad, Ford, Forster, Mann, Gide, Joyce, Proust, Lawrence, Woolf, Kafka, Faulkner, Hemingway and Fitzgerald to show aspects of the modern variously English, Continental and American. Usually offered in odd years. Mr. Onorato		

English 222b. The "Modernist" Novel: Virginia Woolf	<p>This seminar will undertake a close study of Virginia Woolf in an attempt to see her in, and to interrogate, the literary context of Modernism and the literary/political context of feminism. The works of fiction will be emphasized, but will be read in the personal context of her other prose writings and criticism, her journals and letters. A reading of biography and relevant criticism will be expected.</p> <p>Usually offered every third year.</p> <p>Mr. Onorato</p>	English 235b. Blake and Wordsworth	<p>We will take Wordsworth's major lyric poetry and The Prelude and Blake's The Four Zoas and Jerusalem as the central poetic texts for the term's work. Our purpose will be to investigate Romantic poetry in its relationship to contemporary political, social and poetic events. We will begin by focusing on the 1790s, reading in the Revolution Debate (i.e., Thewell, Burke, Paine, etc.), and some recent commentary upon it (e.g., E.P. Thompson and Marilyn Butler). Wordsworth's experience in the 1790s produced the materials for much of his retrospective poetry, and Blake's prophetic work is born out of the struggles of the period. We will attempt to formulate some general propositions about the relationship between poetry and history as we take Wordsworth and Blake as both idiosyncratic and exemplary historical poets.</p> <p>Usually offered every third year.</p> <p>Ms. Janowitz</p>
English 226b. Whitman and Dickinson	<p>An introduction to the whole works of Dickinson and Whitman. An effort will be made to study the two masters in context of the poetry and poetics of the period, the liturgies and theology of American Protestantism, the circumstances of the Civil War and the political configuration of the time (especially as represented by Lincoln and his writings).</p> <p>Usually offered every third year.</p> <p>Mr. Grossman</p>	English 237a. Theories of the Novel	<p>A study of major statements of the theory of the novel, including selections from the works of Aristotle, James, Lubbock, Auerbach, Watt, Booth, Barthes, Genette, Lukacs, Bakhtin.</p> <p>Usually offered every third year.</p> <p>Mr. Goodheart</p>
English 230b. American Poetry and Poetics: Edward Taylor, Poe, Hart, Crane, T.S. Eliot	<p>The purpose of this seminar is to read and make sense of four American poets. Our concern will be directed toward the kinds of poetic construction that constitute American poetry, the particular intentions that drive American poetic enterprise and the relationships that arise between American poetic culture and other aspects of American civilization.</p> <p>Usually offered in even years.</p> <p>Mr. Grossman</p>	English 243b. Sonnets and Lyrics: Tudor and Elizabethan	<p>This course will study the short poem between 1520 and 1600, in both the native tradition and the tradition of Italian influence. The major figures to be read include John Skelton, Wyatt, Surrey, Sidney, Spenser, Shakespeare, Campion, the writers of airs and madrigals, Jonson and the early Donne. Among the motifs to be examined are the development of the sonnet, the use of <i>persona</i>, Renaissance musical realization of lyric texts (Dowland, Campion, the madrigalists), the individualization of diction and metaphor and the satiric voice.</p> <p>Usually offered every third year.</p> <p>Mr. Levitan</p>
English 232b. Chaucer	<p>A survey of the historically pivotal literary career of Chaucer, with emphasis on The Canterbury Tales. Chaucer's works as social analysis and critique, from the point of view of a bourgeois outsider in an aristocratic milieu; Chaucer's medieval genres and their transformation into vehicles of an early modern sensibility; medieval relations of secular literature to its audience(s); orality, literacy and the Book. Some previous knowledge of Middle English recommended but not required.</p> <p>Usually offered every third year.</p> <p>Ms. Campbell</p>	English 246a. American Romantic Fiction: Precursors and Classics	<p>This course will examine the origins and flowering of romanticism in the American novel. Authors to be considered will include: Charles Brockden Brown, Washington Irving, James Fenimore Cooper, Nathaniel Hawthorne, Herman Melville.</p> <p>Usually offered every third year.</p> <p>Mr. Gilmore</p>

English 247a.
**Faulkner, Joyce
Woolf**

In this course, important works by each of the three authors will be closely read. A proposed focus is how each one developed “modernist” fictional techniques in connection with a specific rejection of 19th-century idealistic attitudes — attitudes that were part of the author’s personal life and intellectual training. In *Sanctuary* Faulkner rejected an inherited moral idealism and satirized upperclass values, including the idealization of women. In *The Sound and the Fury* he subjects to moral ridicule a caricature of his own aesthetic posturizing as a Swinburnian poet and “decadent” Southerner. In *To the Lighthouse* Woolf dramatizes the abstract and tyrannical idealization of her truth-seeking 19th-century father and pushes in this and other works (including *Mrs. Dalloway* and *The Waves*), toward what she designates as a feminist mode of perception and of writing. In Joyce’s case the rejected background is just as personal (his Irish sentimentality and his Catholic idealism), but his literary search is more specifically for ways to objectify, depersonalize and thus escape the corrupted emotional force of inherited commitment.

Given this framework, the course will be open to the study of texts that exhibit parallel autobiographical tensions, for example Chopin’s *The Awakening* and Flaubert’s *Madame Bovary*. A correlative concern, for those interested, will be the connection (historical and theoretical) between modernist strategies, as illustrated by these pivotal authors, and poststructuralist concerns.

Usually offered every third year.

Mr. Swiggart

English 250b.
**Historical and
Theoretical
Introduction to
Modern English
Versification**

The 15th-century shift in orthography and pronunciation made Chaucer’s prosody largely opaque to early 16th-century readers, and English versification was effectually reinvented by such poets as Wyatt and Surrey. Stevens’ claim that the theory of poetry *is* the life of poetry certainly seems borne out by the explosion of experimental forms that occurred in the Renaissance and the arguments it fomented among poets and critics, which continue to this day. Theory and history are deeply interfused, and this course will address both, with special attention to Wyatt, Surrey, Sidney, Spenser, Daniel, Shakespeare, Donne, Milton, Dryden, Pope, Smart, Wordsworth, Shelley, Byron, Dickinson, Tennyson, Eliot, Stevens, Ashbery and Merrill, as a possible list of practitioners (who also theorize) and Freud, Blanchot, Esthópe, Empson, Westling, Hollander, Saintsbury, Bridges, Attridge and Wimsatt, as theorists (some of whom, in one way or another, practice). The theoretical focus of the course will be the questions: What is the object of a history of English rhyme? That is, what are rhyme and meter and what is their connection to poetic meaning? The seminars will be arranged by topic, but this also means, to some extent, chronologically, since topics and foci change historically.

Usually offered in even years.

Mr. Flesch

English 257a.
Yeats and Stevens

Our project in this course is to read Yeats and Stevens, as far as possible, whole for whatever truth and pleasure is in them, and (secondarily) to acquire sufficient knowledge of the technical scholarship that now attends the study of these poets to validate such statements as we may wish to make about them. Stress will be put on the separate histories of poetic structure and philosophical understanding that produce the specific character of the Irish and American poet, and also on the solutions of each (in light of their discrete cultural situation) to the problems that they face in common — the imaging of persons, national identity in a postcolonial civilization and the transnational enigma of “modernism.” Yeats’ characteristic styles of construction — both metrical and philosophical — will (most likely) be seen to be substantiated and problematized in the intricately syncretic, millennial cultures of (transcendental) pattern, and Stevens’ (following Whitman, Santayana and James) in the antithetical, archetypal strategy of the (immanent) matrix.

Usually offered every third year.

Mr. Crossman

English 260.
**The Language of the
Other: The Theory
and Practice of
Allegory**

A seminar on the theory and practice of allegorical literature; we will focus primarily on Spenser’s *Faerie Queene*, although we will read broadly in allegorical and quasi-allegorical literature (the Bible, allegorical rewritings or reinterpretations of Virgil and Ovid, Dante, Chaucer, Romantic poetry, 19th-century romance, Kafka). Topics to be considered might include the following: allegory and typology, allegory and realism, allegory and history, allegory and/as criticism. Theoretical readings might include the following: Plato, Longinus, Dante, Kant, Blake, Coleridge, Schelling, Shelley, Yeats, Freud, Benjamin, Jakobson, Lewis, Frye, Lacan, Fletcher, de Man, Fineman.

Usually offered every third year.

Mr. Morrison

English 264a.
Pope and Fielding

A study of two major 18th-century comic writers with an emphasis on exploring some common ground between the poet and the novelist, including their complex uses of irony and sentiment and on considering the generic experiments of both. Among the issues to be considered are both writers’ highly self-conscious relation to new developments in the early modern book trade as that self-consciousness is evident in a play such as Fielding’s *The Author’s Farce* or a poem such as Pope’s “Epistle to Dr. Arbuthnot.” We will also inquire why both, in works such as Fielding’s *The Tragedy of Tragedies* and Pope’s *Dunciad Variorum*, were impelled to parody newly emerging modern literary scholarship. Students who have not yet read Fielding’s major novels (*Joseph Andrews*, *Tom Jones* and *Amelia*) may wish to do so before the term begins.

Usually offered every third year.

Ms. Staves

English 266b. Class in American Literature	<p>This course will address the question, does class have a place in discussion of American literature? Class emerges as a category in English novels of the 19th-century, but its significance in American fiction seems far more problematic. Do American writers uncritically endorse the national ideals of social mobility and classlessness? Do issues of gender and race obscure or mask concern for class? Readings will include stories and novels by Poe, Hawthorne, Melville, Rebecca Harding Davis, Twain and Jack London. Several works from the English tradition will be added for comparative purposes.</p> <p>Usually offered every third year.</p> <p>Mr. Gilmore</p>	English 352-374a and b. Directed Research	<p>352a and b. Mr. Goodheart</p> <p>356a and b. Mr. Swiggart</p> <p>357a and b. Mr. Crossman</p> <p>358a and b. Mr. Gilmore</p> <p>359a and b. Ms. Klein</p> <p>360a and b. Mr. Levitan</p> <p>361a and b. Mr. Onorato</p> <p>362a and b. Ms. Staves</p>	<p>363a and b. Ms. Campbell</p> <p>364a and b. Mr. Harper</p> <p>367b. Mr. Wolff</p> <p>368a and b. Mr. Burt</p> <p>371a and b. Mr. Flesch</p> <p>372a and b. Ms. Janowitz</p> <p>373a and b. Ms. Michie</p> <p>374a and b. Mr. Morrison</p>
English 295b. Studies in a Major Text	<p>Required of all first-year students.</p> <p>Offered every year.</p> <p>Mr. Levitan</p>	English 402d-413d. Dissertation Research	<p>402d. Mr. Goodheart</p> <p>406d. Mr. Swiggart</p> <p>407d. Mr. Crossman</p> <p>408d. Mr. Gilmore</p> <p>409d. Ms. Klein</p>	<p>410d. Mr. Levitan</p> <p>411d. Mr. Onorato</p> <p>412d. Ms. Staves</p> <p>413d. Mr. Burt</p>
English 299b. Pedagogy	<p>Modern theories of pedagogy and composition with practical experience. Students will be apprenticed to current instructors.</p> <p>Usually offered every year.</p> <p>Mr. Burt</p>			

French

See Joint Program of Literary Studies

German

See Joint Program of Literary Studies

History

See Comparative History

History of American Civilization

Objectives

The graduate program in the History of American Civilization, leading to the degree of Doctor of Philosophy in history, has been designed primarily to educate professional scholars and teachers of American history. The curriculum emphasizes both a comprehensive understanding of American history and the mastery of historical research and writing. For a comparative view of the American experience, students will undertake elective studies in modern European, Asian, Latin American or African history.

A small, select student body works closely with the faculty in independent reading and research courses. From the beginning, individual programs are developed to prepare students for their qualifying examinations and to guide them toward their dissertation research. Normally, the first year's work is concentrated in American history, including substantial experience in directed research and a critical approach to problems of historiography. Second-year students, while pursuing further directed research, chiefly are encouraged to choose courses to complete their preparation in the examination fields. Studies in related fields are arranged individually with appropriate members of the University's graduate faculty, either through standard courses or directed readings. For selected students with appropriate qualifications, there are opportunities for advanced study and research with distinguished scholars at neighboring universities in such fields as legal history and business history. Applicants should note with care the four parts of the examination, specified under **Degree Requirements**, in which all students are expected to demonstrate proficiency.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this program. An undergraduate major in history is the preferred preparation for admission, and the student's undergraduate curriculum should include some fundamental courses in American history and related fields in the social sciences or humanities. Students with the M.A. in history, or a professional degree in law or other related fields, are especially invited to apply. Students interested in Crown Fellowships or in the special arrangements for study in professional fields at neighboring universities, noted above, should submit applications by March 1.

Faculty

Executive Committee
and Staff

Associate Professor
James T. Kloppenberg,
Chair:
Modern intellectual
history.

Professor
**David Hackett
Fischer:**
Social and political
structure. Early
Republic.

Professor
Morton Keller:
Legal and political
institutions. Modern
America.

Professor
Stephen Whitfield:
Modern America.
Cultural history.

Associate Professor
Gerald S. Bernstein:
American art and
architecture.

Associate Professor
Christine Heyrman:
Community, religion
and economic colonial
America.

Degree Requirements

Master of Arts

No one will be accepted in the program who is not a doctoral candidate. Applications from persons seeking a terminal M.A. degree are not welcome. However, the M.A. degree in history may be awarded to those who (1) have successfully completed one full year of residence at Brandeis University (eight half-courses), including two 200-level research courses, and (2) have passed the foreign language requirement.

Doctor of Philosophy

Program of Study.

Doctoral candidates must complete two years in residence at Brandeis, and a minimum of 16 semester courses. Programs of study and concentration will be formulated for each student, subject to the approval of the Executive Committee. Students will be required to maintain an average of B- or better in order to continue in the program. Continuance of fellowship support requires an average of A- or better. Incoming students normally will be expected to take two semester courses of Directed Research in American History in their first year of residence. The Committee may, at its discretion, grant a student transfer credit of up to one year toward the Ph.D. residence requirement for relevant graduate or professional work done elsewhere. Application for such credit shall be considered only after a student has completed one semester's residence in a full-time program. The second 200-level Directed Research course may be waived by the committee on the basis of a master's thesis or comparable research project at the graduate or professional level done elsewhere. In the first year all students enroll in the Colloquium in American History; in the second year, the Colloquium in Comparative History.

Language Requirement.

A high level of reading proficiency in one foreign language is required of all students. Students are expected to pass the language examination during the first year of residence. A student who has not passed the foreign language examination by the end of the first year is not eligible for financial aid from the University for the second year. The completion of language requirements at another university does not exempt the candidate from the Brandeis requirement.

Qualifying Examination.

Each doctoral candidate must pass at the doctoral level a qualifying examination in the following four fields: (1) general American history, one examiner to be in early American history and the other in modern American history; (2) a period of specialization in American history; (3) an area of comparative modern European, Asian, Latin American or African history; (4) a related discipline in the social sciences or humanities or a subdiscipline in history. All proposed fields must be submitted in writing and approved by the Executive Committee. The period of specialization will normally be selected from the following: 1607-1763, 1763-1815, 1815-1877, 1877-1914, 1914-present. (5) The area in comparative history may focus on such themes as 19th-century emigration/immigration, 18th-century American and European political and social philosophy, the history of the modern family, or the frontier in global perspective. The fourth field may involve training in politics, international relations or literature, for example, to provide perspectives and methods that can illuminate historical problems. Or it can involve a subdiscipline in history that has a distinctive subject matter and methodology, such as American social, legal, ecological or intellectual history. Students entering the program without previous graduate training in American history are expected to take the Qualifying Examination no later than the end of their fifth semester of residence and must pass the examination by the end of the sixth semester.

Students who have earned an M.A. in history elsewhere, or who have one year of transfer credit for work taken elsewhere, are expected to take and pass the Qualifying Examination by the end of their second year in the program.

Unless the student elects a single three-hour oral examination on all four fields, the Qualifying Examinations will be taken separately in each of the fields, with the general American field coming at the end. For each of the fields (2), (3) and (4), as above, the student will choose one appropriate professor with the approval of the chair of the program. That professor, in consultation with the student, will define the requirements, course of preparation and mode of examination (written and/or oral) for the field.

For the general American field, the Chair will appoint two members of the Executive Committee as examiners. The student may choose a one-hour oral examination or a three-hour written examination followed, if the examiners so require, by an oral examination. In either case, the two professors in consultation with the student will define in advance the major themes or problems on which the examination will be based. So far as possible, fields (3) and (4), as above, should be selected with a view to broadening and deepening the student's understanding of his/her American history fields, and providing valuable background for the dissertation work.

With the consent of the chair and the professor concerned, qualified students in appropriate cases may be examined in fields (3) or (4), as above, by a faculty member at another university. Moreover, with the consent of the Executive Committee, examinations in fields (3) or (4), as above, may be waived for students with the M.A., J.D. or other advanced degrees that represent a level or kind of training and achievement fully equivalent to those required in the Brandeis examinations for those fields.

Admission to
Candidacy.

A student may be admitted to candidacy for the Ph.D. degree upon satisfactory completion of the following: course and residence requirements, demonstration of a high level of proficiency in one foreign language, the qualifying examinations and when the prospectus for a dissertation is approved by the Executive Committee.

Dissertation and
Defense.

When the dissertation is accepted by the Committee, a final oral examination will be scheduled at which the candidate must successfully defend his or her dissertation before the Committee and other members of the faculty who may participate.

Courses of Instruction

History 190a. Historiography

A critical analysis of classical historiography.
Usually offered in odd years.
Mr. Fischer

History 191b. Psychohistory

Usually offered in odd years.
Mr. Binion

History 194b. Politics and Diplomacy in Europe

Usually offered in odd years.
Mr. Schuker

History 197a. Colloquium in the History of American Civilization

Usually offered every year.
Ms. Heyrman

History 197b. Seminar in Comparative History: Europe 1890-1914

Usually offered every third year.
Mr. Binion

History 200a. Colloquium in Early Modern Comparative History

An introduction to the major issues and methods in the social history of Europe in the early modern and modern periods.
Usually offered every year.
Mr. Cohn

History 200b. Colloquium in European Comparative History Since the Eighteenth Century

Comparative examination of major historical issues in Europe from the 18th through the 20th centuries.
Usually offered in even years.
Mr. Schuker

History 201e-208e. Directed Research in American History

Students will normally elect one of the following in the fall term of the first and the second years. Each is designed to provide experience in designing, researching and writing a substantial essay of a monographic character, based on extensive use of sources. This is the equivalent of a full course and extends the due date for the final draft of the paper to March 1, to permit sufficient time for a major project. Specific research topics are selected by the student in consultation with the professor.
Offered every year.

201e. Topics in American Art and Architecture

Mr. Bernstein

202e. Topics in Social History with Emphasis on the Early Republic

Mr. Fischer

203e. Topics in American Colonial History

Ms. Heyrman

204e. Topics in Modern America

Mr. Keller

205e. Topics in Modern Intellectual History

Mr. Kloppenberg

208e. Topics in Modern American Cultural History

Mr. Whitfield

History 210b. Colloquium in the History of American Civilization

Usually offered in even years.
Staff

History 301-307. Readings in the History of American Civilization	Usually offered each semester.		For courses available to History of American Civilization students in other historical areas, see the listings by department and programs in the Graduate School and College catalogs, especially under Comparative History. In addition, the following courses may be taken as equivalent to History of American Civilization seminars.
	301a or b. Mr. Bernstein	304a or b. Mr. Keller	
	302a or b. Mr. Fischer	306a or b. Mr. Whitfield	
	303a or b. Ms. Heyrman	307a or b. Mr. Kloppenberg	
The following courses are offered on a regular basis to groups of students who wish to use them to prepare for their general examinations.			
History 312-318. Readings in the History of American Civilization	Offered every year.		
312a or b. American Social History, 1750-1850	Mr. Fischer		
313a or b. Colonial History, 1607-1750	Ms. Heyrman		
314a or b. Political History, 1870-present	Mr. Keller		
315a or b. American Intellectual History, 1870-present	Mr. Kloppenberg		
318a or b. American Cultural History	Mr. Whitfield		
History 401d-406d. Dissertation Research	Offered every year.		
	401d. Mr. Bernstein	404d. Mr. Keller	
	402d. Mr. Fischer	406d. Mr. Whitfield	
	403d. Ms. Heyrman		
			History 151a. The Early Republic
			Usually offered every four years. Mr. Fischer
			History 151b. The American Revolution
			Usually offered in odd years. Ms. Heyrman
			History 152a. Colonial New England
			Usually offered in even years. Ms. Heyrman
			History 152b. American Social and Cultural History Since the Civil War
			Usually offered in odd years. Staff
			History 153b. Slavery and the American Civil War
			Usually offered every third year. Mr. Fischer
			History 154a. American Society and the American Revolution
			Usually offered every third year. Ms. Heyrman
			History 154b. The History of Modern America
			Usually offered in even years. Staff
			History 155a. Environmental History of North America
			Usually offered every year. Staff
			History 155b. Women in American History, 1890 to the Present
			Usually offered every year. Ms. Antler
			History 156a. American Social History, 1750-1860
			Usually offered in even years. Mr. Fischer
			History 158a. The Cultures of American Working People, 1865 to the Present
			Usually offered every year. Staff

History 159a. American Urban History since the Civil War	Usually offered in even years. Staff
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History 163a. American Foreign Relations in the Twentieth Century	Usually offered in odd years. Mr. Schuker
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History 161b. The American Polity	Usually offered in even years. Mr. Keller
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History 167b. Topics in American Legal History	Usually offered in odd years. Mr. Keller
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History 162a. Topics in American Intellectual History: From Liberal Democracy to Social Democracy	Usually offered every year. Messrs. Kloppenberg and Hulliung
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History 169a. Thought and Culture in Modern America	Usually offered every year. Mr. Kloppenberg
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International Economics and Finance

Objectives

The Lemberg Program in International Economics and Finance offers an innovative master's degree for students planning careers in international economics, business and finance. Combining courses in financial aspects of management, international economics and international relations, the program offers advanced technical training in international economics and finance along with broad preparation in the political and cultural aspects of international economic relations. One term of study is spent at a foreign university affiliated with the program.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. Either GMAT or GRE scores are required. An undergraduate concentration in economics is not required, but applicants are expected to have a background in economics and related analytical subjects. Undergraduate work should include courses in intermediate microeconomics, statistics and international relations. Applicants should also have attained some proficiency in at least one major foreign language.

Faculty

Professor
Peter A. Petri,
Director, Lemberg
Program:
International trade.
Development. Japan.
Korea.

Professor
Anne P. Carter:
Technology progress.
Technology transfer.

Professor
**F. Trenery Dolbear,
Jr.:**
Macroeconomics.
Theory and computer
simulations.

Professor
Robert Evans, Jr.:
Japan. Labor.
Economic history.

Professor
Rachel McCulloch:
International trade
theory. Trade policy.
Macroeconomic
coordination.

Professor
**Barney K.
Schwalberg:**
Soviet economy.
Labor. Education.

Professor
**Richard S.
Weekstein:**
Development. Law
and economics. Trade.

Visiting Professor
Robert Z. Aliber:
International finance.
Multinational
corporations.

Visiting Professor
Evsey D. Domar:
Comparative
economic systems.
Soviet economy.
Russian economic
history.

Visiting Professor
Robert Stern:
Trade theory. Public
policy.

Adjunct Professor
Norman Fielke:
International
economics.

Adjunct Professor
Jane Hughes:
Domestic and
international cash
management.

Adjunct Professor
Allen Sinai:
Macroeconomic
forecasting.

Assistant Professor
Philippe Bachetta:
International
economics.
Macroeconomics.
Applied econometrics.

Assistant Professor
Elise Brezis:
International
economics. Economic
history.

Assistant Professor
Stefan Gerlach:
International finance.
Macroeconomics.

Assistant Professor
Gary Jefferson:
China. Technical
progress. Open
economy
macroeconomics.

Assistant Professor
Arthur Lewbel:
Econometrics.
Demand theory.
Aggregation.

Assistant Professor
Robert Weiner:
Industrial
organization.
International trade.
Regulation and public
policy. Business
economics. Natural
resource economics.

Degree Requirements

Master of Arts

Students must successfully complete an approved schedule of at least 12 courses during their three terms of residency at Brandeis. These will include five required courses, at least three electives selected from a "core option" group and a final-year seminar that includes work on a master's project. Students must also successfully complete an approved schedule of courses during one term of study at an affiliated foreign university.

Residence Requirements.

Two years of full-time study at the normal course rate will be required. One term of study will be spent at a foreign university associated with the program.

Language Requirement.

Candidates will be required to demonstrate a high level of proficiency in one modern foreign language.

Internship.

Students are encouraged to serve as interns with a business or governmental agency in the summer following their first year of study.

Thesis.

A master's project involving a one-term thesis, or a report on an appropriate internship must be submitted no later than April 15 of the year in which the degree is to be conferred.

Courses of Instruction

IEF 111a. International Corporate Finance	<p>Analysis of the exposure of the multinational firm from accounting and economic perspectives, survey of techniques in foreign trade and investment finance, working capital management and other international operations. Introduction to international business strategy, including tax management, political risk and global capital budgeting. Prerequisite: Concurrent enrollment in ECON 163a or IEF 201a.</p> <p>Usually offered every year.</p> <p>Ms. Brezis</p>	Economics 136b. Methods for Managerial Economics	<p>Usually offered every year.</p> <p>Mr. Lewbel</p>
IEF 112b. Accounting and Financial Analysis I	<p>Develops basic concepts and accounts and applies them to income measurement, capital values and cost. Special emphasis on the valuation of economic enterprises in an international setting. Through the use of cases develops the basis for rational choice and control of business activity.</p> <p>Usually offered every year.</p> <p>Ms. Hughes</p>	Economics 141a. The Economics of Technological Change	<p>This course is designed to give students of economics a deeper understanding of the role of technological change in modern economic analysis and to help them to identify and analyze important issues concerning technology in the nation's economy. Topics include the representation of technological change in various production functions, studies of change at the sectoral level, interdependence of sectoral decisions, factor productivity and economic growth, technology transfer and technology assessment.</p> <p>Usually offered in odd years.</p> <p>Ms. Carter</p>
IEF 115b. International Financial Markets	<p>Analysis of the institutions and instruments of international capital markets and a survey of key market participants. Analysis of spot, forward and options markets for foreign exchange, parity rules and arbitrage. Survey of Eurocurrency markets and international bond markets, and the techniques used by firms to control foreign exchange exposure. Signature of instructor required.</p> <p>Usually offered every year.</p> <p>Staff</p>	Economics 160a. International Trade Theory	<p>Analysis of the causes and consequences of international factor movements. Topics include basic determinants of trade, effects of trade on economic welfare and income distribution, the interaction of trade and economic growth, tariff and nontariff protection, economic integration, international technology transfer and direct foreign investment.</p> <p>Usually offered every year.</p> <p>Mr. Stern</p>
IEF 121a. Law and International Economics	<p>A selected review of laws, US and foreign, that applies to international transactions and the operation of financial institutions as well as an economic analysis of international, commercial and financial law. Topics will include a discussion of contracts, property, torts, anti-trust and the regulation of international trade and financial institutions. Term paper and final examination.</p> <p>Usually offered every year.</p> <p>Mr. Weckstein</p>	Economics 161a. Multinational Corporations	<p>The course begins by analyzing world economic growth, with emphasis on the historical pattern of rapid spurts of growth in particular countries. It then examines the impact of the global environment — changes in exchange rates, exchange controls, differential rates of growth and inflation and differences among countries in consumer tastes and business regulation — on the firm's sourcing, marketing and financing decisions. Attention is given to the concept of the international industry, the determinants of the number of firms worldwide, the international location of management and production and conflicts between firms and nation-states.</p> <p>Usually offered every year.</p> <p>Mr. Aliber</p>
IEF 123a. Economy of Europe	<p>Examines the evolution of modern Western European economics with an emphasis on the postwar experience and on current issues. The topics include the institutions of the European community, such as EMS and the ECU; the integration of goods and capital markets; the problems of unemployment and slow growth; the role of Europe in the world economy.</p> <p>Usually offered every year.</p> <p>Mr. Bacchetta</p>	Economics 171a. Financial Theory	<p>This course will cover a selection of topics at the frontier of theoretical work in finance. Topics will include the evaluation and selection of assets, the behavior of investors under risk, portfolio composition, theories of the equilibrium prices of assets such as the Capital Asset Pricing Model and the Arbitrage Pricing Model, prices of options, the controversies over the levels of dividends and debt and the efficient market hypothesis.</p> <p>Usually offered in even years.</p> <p>Mr. Rathjens</p>

Economics 171b. Topics in Finance	<p>This course, an extension of ECON 171a, will investigate several topics in finance in greater detail than in 171a.</p> <p>Among the topics to be covered are the theory of choice using state-preference utility theory, the pricing of contingent claims, future contracts and markets and current empirical analysis into questions in finance. Reflecting this emphasis on empirical analysis, students will be expected to lead class discussions on recent journal articles. Students will also be expected to write an empirical paper and to present their findings. Econometrics or a strong background in statistics is strongly recommended.</p> <p>Usually offered in even years.</p> <p>Mr. Rathjens</p>	Economics 184b. Econometrics	<p>An introduction to the theory and application of econometric models. The focus is on derivation, estimation and analysis of simple and multiple regression models. Topics including hypothesis and specification testing, heteroscedasticity and serial correlation, instrumental variables and two staged least squares, forecasting, dynamic modeling and simultaneous systems estimation. Recommended for students interested in techniques for analyzing business or economic data.</p> <p>Usually offered every year.</p> <p>Mr. Lewbel</p>
Economics 172b. Money and Banking	<p>The industrial structure of the money market and the effect of structure upon the effectiveness of monetary policy. Financial intermediaries will be described and analyzed in general; primary emphasis will be on the way particular intermediaries, markets and financial instruments work and their effectiveness as transmitters of monetary policy. Topics to be studied include commercial banking, the mortgage market, the new financial instruments — NOW accounts, money market funds, branch banking and Eurodollars.</p> <p>Usually offered every year.</p> <p>Mr. Weckstein</p>	Economics 186b. Quantitative Models in Economics and Finance	<p>Survey of multi-equation quantitative models in economic and financial analysis. Model types to be covered will include macroeconomic models, financial and other simulation models, computable general equilibrium models, input-output analysis and linear programming. The course will emphasize application rather than theory and each segment will feature hands-on experiments with computerized models. Students will also be required to develop a simple model as an independent project. Some prior elementary matrix algebra will be helpful.</p> <p>Usually offered in odd years.</p> <p>Mr. Petri</p>
Economics 175a The Economics of Development	<p>An introduction to various models of economic growth and development and evaluation of these perspectives from the experience of both developing and industrial countries. Topics include the transition of nations from predominantly agricultural economies to industrial economies; the contributions of capital, technical change and foreign investment to development; the interactions between development, population growth and income distribution; alternative strategies of external trade for promoting development.</p> <p>Usually offered in even years.</p> <p>Mr. Jefferson</p>	Economics 187c. Business Fluctuations and Forecasting	<p>The course develops an analytical framework for forecasting economic and financial market activities in the context of the American business cycle. A model-building approach is utilized to construct elementary and then intermediate and more contemporary models of the U.S. economy and financial markets. The theory, history and characteristics of business fluctuations are discussed and various forecasting methods are presented. Throughout, actual data and real world examples are used to develop students' understanding of the forecasting process.</p> <p>Usually offered in odd years.</p> <p>Mr. Sinai</p>
Economics 182a. Advanced Macroeconomics	<p>This course extends the analysis of macroeconomic issues introduced in ECON 82b.</p> <p>Special topics include inflation, unemployment, supply-side economics, rational expectations, the "twin deficits," monetarism, spending, long-run properties of short-run models and the microeconomics of macro models.</p> <p>Usually offered every year.</p> <p>Mr. Dolbear</p>	Economics 188b. Optimization in Economics	<p>This course covers mathematical and statistical optimization techniques, including Lagrange multipliers, Kuhn-Tucker methods, linear programming, game theory and decision theory. Applications will focus on microeconomic problems, especially production functions and utility maximization.</p> <p>Usually offered every year.</p> <p>Mr. Lewbel</p>

<p>IEF 201a. International Macroeconomics I</p>	<p>Analysis of national accounts and economic fluctuations, equilibrium in goods and money markets, aggregate supply and demand and the role of trade and international capital movements. Open-economy concepts are stressed and international comparisons are used to highlight the microeconomic determinants of macroeconomic institutions and policy.</p> <p>Usually offered every year.</p> <p>Mr. Stern</p>	<p>IEF 212b. Accounting and Financial Analysis</p>	<p>Analysis of the techniques used by accountants to measure assets, equities and profits, with particular emphasis on the preparation and especially interpretation of corporate financial statements. Survey of alternative accounting systems and analysis of authoritative pronouncements. Emphasis on international issues.</p> <p>Usually offered every year.</p> <p>Mr. Hazelkorn</p>
<p>IEF 202a. International Macroeconomics II</p>	<p>Systematic treatment of open-economy macroeconomics for both small and large economies. Analysis of international flows of goods and capital, international financial arrangements and policy interdependence under fixed and flexible exchange rates. Review of the performance of different postwar financial regimes and of empirical results in exchange rate determination and forecasting.</p> <p>Usually offered every year.</p> <p>Mr. Bachetta</p>	<p>IEF 214a. International Business Economics and Strategy</p>	<p>Concepts and evidence from industrial organization and international trade are applied to problems of business strategy, focusing on competition in international markets. Specific topics include the structure of competition in international industries, strategic segmentation of international markets, international sourcing and contractual arrangements and the role of institutions such as trading firms and countertrade. The course also examines the role of official interventions through international regulatory bodies as well as national trade, investment and industrial policies.</p> <p>Usually offered every year.</p> <p>Mr. Weiner</p>
<p>IEF 203a. Analysis of International Economic and Financial Issues</p>	<p>Introduction for first-year graduate students to important problems and basic analytical methods in the fields of international economics and finance. The course will cover current issues in economic policy as well as cases in international financial and business strategy. The course will emphasize writing and presentation skills through short paper assignments and in-depth classroom discussions.</p> <p>Usually offered every year.</p> <p>Mr. Aliber and Ms. McCulloch</p>	<p>IEF 227b. Economy and Japan</p>	<p>Examination of Japanese economic history, growth and special features of Japanese economic institutions. Topics include various issues in labor economics, industrial organization, economic strategy at both the micro- and macroeconomic levels and prospective changes in dependence on trade.</p> <p>Usually offered every year.</p> <p>Mr. Evans</p>
<p>IEF 211b. Case Studies in International Finance</p>	<p>Case studies in the practice of international corporate finance in the areas of international exposure, corporate capital transactions, portfolio management, international banking and investment banking.</p> <p>Usually offered every year.</p> <p>Mr. Hughes</p>	<p>IEF 265a. The Economy of China</p>	<p>This course examines special features of important periods and episodes of China's modern economy, starting with the pre-revolutionary period and including the recent reform program. Major themes of the course include the impact of various institutional arrangements and experiments, investment priorities, population growth, foreign technology and trade on the pattern and rate of development of the Chinese economy. Since it is unlikely that any other country in the world has embraced the range of national economic objectives and variety of institutional arrangements that China has in the last half century, the study of China's economy offers valuable insights into comparative economic systems, problems of economic and social development and issues of industrial organization.</p> <p>Usually offered in odd years.</p> <p>Mr. Jefferson</p>

**IEF 275a.
The Economics of
Development**

Examines various models of economic growth and development using the experience of both developing and industrial countries. Topics include the transition of nations from predominantly agricultural economies to industrial economies; the contributions of capital, technical change and foreign investment development; and alternative strategies of external trade for promoting development.

Usually offered every year.

Mr. Jefferson

**IEF 299a.
Seminar in
International
Economics and
Finance**

Usually offered every year.

Mr. Petri

Joint Program of Literary Studies

Comparative Literature, French, German, Russian and Spanish

Objectives

The joint program of literary studies accepts students desirous of obtaining an M.A. and/or Ph.D. degree in one of the areas listed above. Interdisciplinary in design, the program aims to train literary scholars and teachers whose professional capabilities will be broader than their individual specialties. Students will have the opportunity to study the theory of literature, history and theory of literary criticism, and scholarly methodology in addition to the specific literatures in which the degree will be earned. A small and carefully selected student body will work closely with the faculty of the program and with one another in a core curriculum before specializing. Students are encouraged to plan an individual program of studies within their field of interest in consultation with their advisor(s). Although the program encourages individual initiative, with the advice and consent of advisor(s), it should be stressed that all students, whatever their areas, must master the basic literature, primary and secondary, in their field. The General Examinations will assume both breadth and depth of such knowledge. (Reading lists for each area are available.)

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this program. Applications must be received no later than March 1. Please be sure to mark clearly the area of your choice (Comparative Literature, French, German, Russian or Spanish) on the application form. Each applicant must submit one or more college-level essay on a literary subject (one of which should be written in English) as a sample of work.

Faculty

Committee:	Professor Edward Engelberg , Chair, Fall Term (Comparative Literature)	Professor Robert Szulkin (Russian)	Associate Professor Dian Fox (Spanish)	In addition, other faculty members of the Departments of Germanic and Slavic Languages and Romance and Comparative Literature participate in this program.
	Professor Murray Sachs , Chair, Spring Term (French)	Professor Harry Zohn (German)		

Degree Requirements

Master of Arts

Students who have completed two years of full-time study in residence may be awarded the M.A. degree. Such students must be in good standing (no incompletes). In addition, such students must have passed the language requirement, either by certification and/or examination, as follows: single area candidates **one** foreign language **other** than the major language. Finally, such students must have passed satisfactorily the Qualifying Examinations.

Doctor of Philosophy

Program of Study.

Individual programs of study will be arranged between students and their advisors. The core curriculum consists of several elements: all students in the program are obligated to enroll in Literary Studies 201 (The History and Theory of Criticism); all students will be held responsible for certain works on literary theory, literary history and aesthetics (not studied in the criticism seminars) at the time of the General Examination.

Although the program is designed to permit students to develop their studies coincident with their interests and talents, and in consultation with their advisor(s), full-time students are expected to enroll in at least **three** literary studies seminars each year during the first two years of residence. In addition to Literary Studies 201, first-year

	students are expected to augment this schedule with at least two additional seminars from the literary studies offerings, and suitable 100-level literature courses in areas of specialization (e.g., French, Spanish, German, etc.).	Dissertation and Defense.	The completed dissertation must be read and found acceptable by its director and two other readers before the candidate is eligible for the Final Oral Examination. The Final Oral Examination will be conducted by a committee of not less than four, one of whom must come from outside the candidate's area.
Residence Requirements.	The minimum residence requirement is two years of full-time study beyond the bachelor's degree. Additional course work during the third year is generally recommended.	Teaching.	All students in the program are expected to do some supervised teaching, either as a teaching assistant or by means of other arrangements. In some areas, where teaching assistantships may at times be unavailable, students will be expected to fulfill some teaching assignments (occasional class lectures, for example) without remuneration.
Language Requirement.	Students will be asked to demonstrate a reading competence in at least two foreign languages to be determined in consultation with their advisors. In certain areas of specialization, additional languages (e.g., Latin) may become necessary research tools. (Comparative literature students should consult the special statement of language requirements below.) Students must be certified in at least one language by the end of the first year in residence.	For Candidates in Comparative Literature.	1. Any student in the program who declares candidacy in comparative literature should decide, as soon as possible, on a major and minor literature. The major literature must be one of those offered by either the Department of Germanic and Slavic Languages or Romance and Comparative Literature (but not Italian). The minor literature may be Italian, English, American or, after consultation, some other literature offered by the University. Exact "proportions" cannot be stated in advance and will be worked out in consultation between students and advisor(s). 2. Candidates in comparative literature are expected to take three language examinations as follows: a. The major language, which should be near level of mastery (reading, writing and speaking) on acceptance to the program. Students may simply be "certified" for this language if their level of competence is obvious. b. The second foreign language should be mastered as a reading language with a fluency that will permit easy access to all primary and secondary literature in the specified area. c. The third foreign language should be a reading tool for primary and especially secondary materials. It is quite possible that for certain areas of specialization — Medieval, Renaissance, etc. — additional languages will become necessary (e.g., Latin, Catalan, Old French).
Qualifying Examinations.	Qualifying examinations must be taken at the start of a student's second full year in residence, with the purpose of determining that the student is qualified to study literature productively at the graduate level. Only students who have a complete and satisfactory record for their first year will be permitted to take the Qualifying Examinations. No postponement of these examinations is allowed. The examinations are both written and oral, and will be scheduled each year for the third or fourth week in September. The examinations are prepared and conducted by a three-member faculty committee chosen at the end of the first year of study by the candidate in consultation with the candidate's faculty advisor. After the examinations, the candidate receives a detailed written evaluation from the three-member committee, based on the written and oral performances and on the entire record of the candidate's first year in residence.		
General Examinations.	Students may take the General Examinations, which demonstrate full competency in their chosen discipline, whenever they and their advisors feel they can appropriately do so. However, all students are expected to have completed the General Examinations no later than the fall term of their fourth year in residence. Examinations will be offered twice each academic year, in October and May, and will consist of three written examinations and an oral examination. Details about the contents and procedures are available on request.		
Admission to Candidacy.	Candidates will be recommended for admission to doctoral candidacy when the residence and language requirements have been met, the General Examinations have been successfully passed, and a prospectus of the candidate's proposed dissertation topic has been approved by a committee of the area concerned.		

Courses of Instruction

Literary Studies 201a. History and Theory of Criticism: The Development of Modern Critical Theories	Offered every year. Mr. Kaplan	Literary Studies 215a. Poetry, Criticism and Modernity: Baudelaire and His Contemporaries	Usually offered every fourth year. Mr. Kaplan
Literary Studies 202b. Fiction: Theory and Practice	Usually offered in even years. Mr. Sachs	Literary Studies 301-306a and b. Readings in Area Studies: Tutorials	Usually offered every year.
Literary Studies 203a. Romantic Phenomena	Usually offered in even years. Mr. Engelberg	301a and b. Comparative Literature. Readings in Comparative Texts	Mr. Engelberg and Staff
Literary Studies 204a. Theory and Practice of Literary Translation	Usually offered in even years. Mr. Zohn	302a and b. French. Readings in French Texts	Mr. Sachs and Staff
Literary Studies 205a. Crosscurrents in the French and English Enlightenments	Usually offered every fourth year. Mr. Gendzier	303a and b. German. Readings in German Texts	Mr. Zohn and Staff
Literary Studies 206b. The Comic in Literature: Theory and Practice	Usually offered every fourth year. Mr. Sachs	304a and b. Russian. Readings in Russian Texts	Mr. Szulkin and Staff
Literary Studies 207a. Marxist Criticism: Literature and Society in Early Modern Europe	Usually offered every fourth year. Ms. Harth	305a and b. Spanish. Readings in Spanish Texts	Ms. Fox and Staff
Literary Studies 208b. Cervantes in his European Context: Heritage and Lineage	Usually offered every fourth year. Ms. Fox	306a and b. Latin-American. Readings in Latin-American Texts	Staff
Literary Studies 209a. Modern Phenomena	Usually offered in odd years. Mr. Engelberg	Literary Studies 351-356a and b. Directed Research	Open to advanced graduate students with the consent of the instructor and the chairman of the Literary Studies Program. Offered every year.
Literary Studies 211a. The Tragic in Literature	Usually offered every fourth year. Mr. Engelberg	351a and b. Comparative Literature	Mr. Engelberg and Staff
Literary Studies 212b. Techniques of Stylistic Analysis	Usually offered every fourth year. Mr. Frey	352a and b. French	Mr. Sachs and Staff
Literary Studies 213b. Modes of the Grotesque in Art and Literature	Usually offered every fourth year. Mr. Szulkin	353a and b. German	Mr. Zohn and Staff
		354a and b. Russian	Mr. Szulkin and Staff
		355a and b. Spanish	Ms. Fox and Staff
		356a and b. Latin-American	Staff

Literary Studies 400d. Offered every year.
Dissertation Research Staff

Following is a list of selected undergraduate courses in each of the areas that constitute the Joint Program of Literary Studies, which may be of special interest to graduate students. For a full list of all courses available consult the undergraduate bulletin under Departments of Germanic and Slavic Languages and Romance and Comparative Literature.

Comparative Literature

Comparative Literature 102a.
Mythology in Medieval Literature This course examines the tensions between pagan literature and Christian theology in the early and high Middle Ages and their resolution through moralized versions of classical myth. Readings in St. Augustine, *The Song of Roland*, Chrétien de Troyes, the *Romance of the Rose*, Dante, Petrarch, *Sir Gawain and the Green Knight* and Chaucer.

Usually offered in even years.

Ms. Perry

Comparative Literature 103b.
Madness and Folly in Renaissance Literature

A study of the theme of madness and folly as exemplified by the major writers of the Renaissance, including Erasmus, Rabelais, Montaigne, Boccaccio, Ariosto, Shakespeare, Jonson and Cervantes.

Usually offered in odd years.

Mr. Lansing

Comparative Literature 104a.
At the Threshold of the Modern World

The challenge to social constraints and the emergence of a new world-view in the West. How early modern literature treated issues of the self, social and sexual relations, women, religion and the philosophical spirit. Readings in Molière, Pascal, Descartes, Aphra Behn, Jonson, Fontenelle, Mme. de Lafayette, Defoe.

Usually offered in even years.

Ms. Harth

Comparative Literature 105b.
Sex and Sensibility in Pre-Revolutionary European Novels

This course will study the concept of human nature with specific attention to whether people can be educated to control or influence their erotic feelings and states of happiness. We shall trace the roles of family, money, personal identity and social norms in structuring the 18th-century novel. The course will focus on the birth of the novel and of romanticism. Required texts: Richardson, *Clarissa*; Fielding, *Tom Jones*; Sterne, *Tristram Shandy*; Diderot, *The Nun*; Rameau's Nephew; Rousseau, *Julie or the New Heloise*; Goethe, *Werther*; Laclos, *Dangerous Liaisons*; Sade, *Justine*.

Usually offered in even years.

Mr. Gendzier

Comparative Literature 106a.
The Age of Contraries: European Romanticism

A study of the Romantic rebellion and its remarkable combination of spiritual vision and social utopianism, against the background of the French Revolution. Literary masterpieces from Germany, England and France that explore problems of faith, passion, art, will be compared with relevant paintings and music. Authors include: Blake, Wordsworth, Goethe, Hoffmann, Chateaubriand, Balzac, Stendhal, Baudelaire. Music: Berlioz, Wagner. Painting: Delacroix, Turner, Friedrich.

Usually offered in odd years.

Mr. Engelberg

Comparative Literature 107b.
European Modernism: The Age of Irony

This course explores the predominance of irony as a major mode of expression in modern art. Irony wears many masks: it often joins the tragic and the comic, deflates the pretensions and permits the artist to manipulate not only the elements of the art but also its audience. Readings in Flaubert, Chekhov, T.S. Eliot, Virginia Woolf, Hesse, Pirandello, Mann, Camus.

Usually offered in odd years.

Mr. Engelberg

Comparative Literature 127b.
The Rise of the Modern Short Story

A study of the emergence and development of the modern short story as a new literary genre in the 19th century, with some attention to defining those characteristics of the genre that most clearly differentiate it from the novel. Works by such exemplary writers as Mérimée, Gogol, Poe, Maupassant, Verga, Anatole France and Chekhov will be examined.

Usually offered in even years.

Mr. Sachs

Comparative Literature 137a.
Dada and Surrealism

The Dadaists first assaulted bourgeois society in Zurich before World War I. Their provocative and humorous diatribes were employed by Dada-Surrealists in Berlin, New York and Paris. We shall examine their manifestos, literature, art and films, which display a rebellious spirit extolling the liberated subconscious, the values of spontaneity and authenticity, the joys of love and freedom.

Usually offered in odd years.

Mr. Gendzier

Comparative Literature 144b. The Outsider as Artist and Lover	Autobiographical, philosophical and literary writings of Kierkegaard, Baudelaire and Kafka, which exemplify the struggle to achieve meaning in an antagonistic age. All were "alienated" writers who believed that their dedication to art or God required them to renounce love and marriage. We shall explore the interrelation of creativity, religious experience and human intimacy in their writings, using Martin Buber to define these problems in today's terms. Usually offered in even years. Mr. Kaplan	Comparative Literature 170b. Tragedy and Modernism: Buchner to Beckett	This course examines various types of modern tragedy from Büchner to Beckett. Among these types are Naturalist Tragedy (Strindberg), Realist and Symbolist Tragedy (Ibsen and O'Neill) and Verse Tragedy (T.S. Eliot and W.B. Yeats). Usually offered in odd years. Mr. Engelberg
Comparative Literature 148a. Karl Marx and the Study of Literature	Readings across the range of Marx's work together with Engels and later Marxist writers. Topics include: Marx's depiction of modern western history; key concepts — alienation, division of labor, class, country vs. city, world market, labor, production, commodities and capital. Application to selected works of fiction (e.g., Faulkner's <i>Light in August</i>) and poetry (e.g., Baudelaire's <i>Les Fleurs du mal</i>). Usually offered in odd years. Mr. Ahearn	Comparative Literature 174a. Sex, Class and Literature in Europe	Interconnections of sex, gender and class in the revolutionary, social, political and industrial climate of 19th-century Europe. An examination of how social and sexual power relations enacted in love, marriage and work were ideologically constructed in the fictional and theoretical literature of the period. Writers to be studied include Charlotte Brontë, Elizabeth Gaskell, Flaubert, Mills, Engels, Gissing, Freud, Gorky. Usually offered in odd years. Ms. Harth
Comparative Literature 150a. The European Novel: Realism	A study of major European novels of the 18th and 19th centuries that were especially influential in shaping a new tradition in the art of fiction: the novel of realism. The development and evolution of the novel of realism will be traced through the close reading of novels by such authors as Laclos, Jane Austen, Balzac, Dickens, Flaubert, Galdós, Tolstoy, Zola, Fontane. Usually offered in even years. Mr. Sachs	Comparative Literature 185a. Dickens and Dostoevsky	This course will consider such issues as narrative technique, literary realism and the manipulation of the grotesque and the sublime in representative works of Dickens and Dostoevsky. Because Dostoevsky was an avid reader of Dickens, we shall address the question of literary influence, particularly with regard to their shared thematic interests: e.g., the rise of the modern city and the depiction of childhood. Usually offered every fourth year. Ms. Miller
Comparative Literature 151b. The European Novel: Modern Period	This course examines one of the major motifs (and the fictional techniques that define it) in the modern European novel: Time and Memory. We will examine novelistic devices such as "modernized" myth, "stream of consciousness," parallel and multiple "plots," moments of "vision." Authors such as Proust, James, Mann, Joyce, Woolf, Kafka. Usually offered in even years. Mr. Engelberg	Comparative Literature 190b. Author, Text, Reader: Contemporary Literary Theory	An examination of the crises and confrontations in contemporary literary theory involving the relationships between author, text and reader. Readings include Hirsch, Booth, Fish, Wimsatt and Beardsley, Barthes, Derrida, Foucault, Showalter, Kristeva. Usually offered in odd years. Ms. Suleiman
Comparative Literature 164a. Family Portraits: The Orphaned Self	This course examines sociological/psychological aspects that shaped the representation of the family in literature. We will trace how the disintegration of the family leads to the "orphaned self." Readings in such authors as Balzac, Dickens, Brontë, Kafka, Turgenev, Ibsen, Strindberg, Woolf, O'Neil, Thomas Mann, Henry James. Usually offered in odd years. Mr. Engelberg	Comparative Literature 199b. The Roots of Literature	An inquiry into the origins of literature as revealed by ancient and modern myths and texts. Usually offered every fourth year. Mr. Yglesias

<p>French</p> <hr/> <p>French 120a. The French Middle Ages</p> <p>This course will explore medieval authors' use of a variety of literary genres to represent and comment upon the society in which they lived, in particular the relationships between men and women, between individuals and the feudal structure, between individual conscience and the strictures of the Catholic church, between the author and his work. Texts will be read in modern French: Chrétien de Troyes' <i>Yvain</i>, the <i>Lais</i> of Marie de France, <i>Le roman de Tristan et Iseut</i>, <i>Le Roman de la rose</i>, <i>Aucassin et Nicolette</i>, the poetry of Rutebeuf, of Villon, of Christine de Pizan and of Charles d'Orléans a selection of <i>fabliaux</i>, <i>La Farce de Maistre Pathelin</i>.</p> <p>Usually offered in odd years.</p> <p>Ms. Perry</p> <hr/> <p>French 122b. The French Renaissance</p> <p>An exploration of the themes of alienation and exile in relation to the role of classical texts, women writers and Protestantism in the development of French Renaissance literature. Readings will include works by Marot, Scève, Du Caillet, Labé, Marguerite de Navarre, Rabelais, Du Bellay, Ronsard, Montaigne, D'Aubigné.</p> <p>Usually offered in even years.</p> <p>Ms. Perry</p> <hr/> <p>French 130a. French Classicism</p> <p>This course will explore the relationship of literature to power. The writers we study were controlled directly or indirectly by Louis XIV, who managed France's culture to suit his political purposes. We will look at the unity of this culture — the integration of literature into the other arts — in the service of power. Representative authors: Corneille, Racine, Molière, Pascal, Boileau, La Fontaine, La Rochefoucauld, La Bruyère.</p> <p>Usually offered in even years.</p> <p>Ms. Hale</p> <hr/> <p>French 132b. The French Enlightenment</p> <p>The origins of Romanticism and Realism; modern notions of tolerance, the pursuit of happiness, feminism; conflicts between primitivism and progress, rationalism and experience, secular humanism and religious morality. These themes will be analyzed in such writers as Cyrano de Bergerac, Fontenelle, Bayle, Montesquieu, Voltaire, Diderot, Rousseau and Sade.</p> <p>Usually offered in even years.</p> <p>Mr. Gendzier</p> <hr/> <p>French 140b. Twentieth-Century French Drama</p> <p>An examination of the theory and practice of 20th-century French theater. Works by Jarry, Artaud, Ciraudoux, Anouilh, Sartre, Adamov, Ionesco, Gênet and Beckett will be considered.</p> <p>Usually offered in even years.</p> <p>Ms. Hale</p>	<p>French 144a. Samuel Beckett's Drama</p> <p>In this course we shall examine the notion that Beckett has invented new dramatic forms to correspond to changes in the concepts of time, space and movement that have occurred in our century. Texts for stage, television, radio and cinema will be read.</p> <p>Usually offered every year.</p> <p>Ms. Hale</p> <hr/> <p>French 150b. Modern French Poetry</p> <p>From Romanticism to Symbolism, the foundations of modern French poetry. Close reading of Baudelaire's <i>Les Fleurs du Mal</i> and selected verse of Rimbaud, Verlaine, Mallarmé and Valéry. The themes of good and evil, the role of art, conceptions of language, and the changing mission of the poet will be emphasized.</p> <p>Usually offered in even years.</p> <p>Mr. Kaplan</p> <hr/> <p>French 152a. French Romanticism</p> <p>The Romantic Revolution dominated France during the first half of the 19th century. We shall study Victor Hugo's central contributions and principal works of fiction: poetry and drama by Balzac, Lamartine, Vigny, Musset. Selections from Baudelaire will exemplify the breakdown of French Romanticism.</p> <p>Usually offered in even years.</p> <p>Mr. Kaplan</p> <hr/> <p>French 160b. Nineteenth-Century French Fiction</p> <p>By focusing on the great landmark achievements in the novel (by Stendahl, Balzac, Flaubert and Zola), and the finest short stories (by Mérimée, Balzac, Flaubert and Maupassant), this course will seek to discover why fiction grew to be the dominant literary form of the 19th-century in France and why realism was the aesthetic ideal of the age. All readings in French. Conducted in French.</p> <p>Usually offered in odd years.</p> <p>Mr. Kaplan</p> <hr/> <p>French 162a. Twentieth-Century French Fiction</p> <p>A study of the theory and practice of French novelists in the 20th century. Authors to be considered include: Gide, Mauriac, Sartre, Beckett, Robbe-Grillet, Tournier, Duras. Particular attention will be paid to the notion of authorial presence in the novel.</p> <p>Usually offered in even years.</p> <p>Ms. Hale</p>
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French 174b.
**Contemporary
French Civilization**

This course is designed for those who seek to acquire a working knowledge of the cultural, social and political context of contemporary France. It focuses on thematic dossiers composed of recent essays and press articles, films, recording and television broadcasts. Topics in recent years have included educational reform, women film makers, the Americanization of French language and culture, architectural renovation in Paris, the poetics of Jacques Brel and Leo Ferrée, xenophobia and the New Right, rhetorical analyses of election campaign speeches and left-wing and right-wing newspapers.

Usually offered every year.

Ms. Marx-Scouras

French 180b.
**French Writing
Outside of France**

This course will explore how an extraordinarily rich, new world literature, based on the notion of *difference* and resulting from the intermixing of cultures, has emerged from the confines of the French language. We shall read literary masterpieces from such geographically diverse places as North America, the Caribbean, Africa, the Maghreb and Southeast Asia.

Readings will be supplemented by films.

Usually offered in odd years.

Ms. Marx-Scouras

German

German 102a.
**German Literature
before 1700**

Lectures and readings in German. Though the emphasis will be on Minnesang, the Middle High German epics, and Baroque literature, there will be some attention to the Gothic and Old High German periods as well as to the literature of the Reformation.

Usually offered every third year.

Ms. Strenger

German 110a.
**Introduction to the
Life and Works of
Goethe**

Intensive study of many of Goethe's dramatic, lyric and prose works, including *Goetz*, *Werther*, *Faust I* and a comprehensive selection of poetry; lectures and readings in German.

Usually offered every third year.

Mr. Zohn

German 120a.
**Enlightenment,
Storm and Stress,
Idealism: Lessing,
Lenz and Schiller**

A survey of the literary and intellectual movements — Enlightenment, Storm and Stress, Idealism — that eventually culminated in German Classicism. Emphasis will be on close analysis of representative works by Lessing, Lenz and Schiller. Lectures and readings in German.

Usually offered every third year.

Mr. Frey

German 130b.
**German
Romanticism**

The course studies literary and theoretical works of the Romantic movement and examines concurrent attitudes toward the German past, religion, philosophy, art, music and science. Lectures and readings in German.

Usually offered every third year.

Ms. Strenger

German 140a.
**German Literature
in the Nineteenth
Century**

A study of German, Austrian and Swiss prose, poetry and drama from Heine to Hauptmann, including the major figures of "Young Germany," Poetic Realism and Realism (Büchner, Droste-Hülshoff, Mörike, Grillparzer, Goethe, Hebbel, Stifter, Nestroy, Keller, Raabe, Fontane, etc.). Lectures and readings in German.

Usually offered every third year.

Mr. Zohn

German 150a.
**The Jewish
Contribution to
German Literature**

This course will examine the literary harvest of the German-Jewish symbiosis from the Minnesinger Süsskind von Trimberg to Nelly Sachs, the poetess of the Holocaust, concerning itself with those Jewish writers in or from Germany (Heine, Wassermann, Lasker-Schüler), Austria (Beer-Hofmann, Schnitzler, S. Zweig) and Czechoslovakia (Kafka, Brod, Werfel) whose writings reflect Jewish themes or were shaped by the creative tension between the writers' Jewishness and the culture of German-speaking countries.

Lectures and readings in English. Students with advanced preparation will be expected to do the reading in German.

Usually offered every third year.

Mr. Zohn

German 160b.
**German Drama and
Lyric Poetry from
Naturalism to the
Second World War**

A survey of major trends in these genres with an emphasis on close analysis of selected works by such writers as Hauptmann, Hofmannsthal, Schnitzler, Kaiser, Brecht, Rilke and George.

Usually offered every third year.

Mr. Frey

German 170b.
**Starting from Zero:
German Literature
Since World War II**

We will trace the efforts of a new generation of German writers in both West and East Germany to come to terms with the horrors of war and totalitarianism and with the materialism of the post-war "economic miracle." Literary investigations will focus on major writers and poets such as Grass, Johnson, Lenz, Wolf, Böll, Celan, Sachs, Bachmann, Dürrenmatt, Frisch, Weiss and Handke. Class discussions will be in English. Readings available in German and in English translation. Viewing of recent German films will supplement material.

Usually offered every third year.

Mr. Frey

German 180a. Twentieth-Century Prose: Mann, Kafka, Hesse	A survey of the work of these three important authors in the context of early 20th-century literary movements. Special emphasis will be given to close analysis and discussion of selected texts. Lectures and readings in German. Usually offered every third year. Mr. Zohn	Italian 140a. Dante's Divine Comedy	A close study of the entire poem — Inferno, Purgatorio, Paradiso — as a symbolic vision of reality reflecting the culture and thought — political, philosophical, theological — of the Middle Ages. Readings will include two minor works, the Vita Nuova and On Monarchy . No knowledge of Italian is required. Usually offered in odd years. Mr. Lansing
German 190b. Vienna at the Turn of the Century	The literary and cultural scene in imperial Vienna during the final decades of Franz Joseph's reign will be explored through the works of such writers as Schnitzler, von Hofmannsthal, Zweig, Altenberg, Herzl and Kraus. Attention will be paid to the relationship between men of letters and innovative thinkers, artists and musicians like Freud, Wittgenstein, Klimt, Loos, Schiele, Mahler and Schoenberg. Usually offered every third year. Mr. Zohn	Russian	
German 195b. The Culture of the Weimar Republic	The focal point will be Berlin in the troubled but fecund decade-and-a-half between the end of World War I and the accession of the Hitler regime. The course will explore aspects of the culture of the time, including literature and music (serious and popular), art and architecture (Grosz and Gropius), the Neue Sachlichkeit (new sobriety) in its various manifestations, the theater of Max Reinhardt and Erwin Piscator, the musical theater of Brecht and Weill, the satire of Kurt Tucholsky and Erich Kästner, and the fabled cabarets of Berlin. Usually offered every third year. Mr. Zohn	Russian 120b. Literary Crosscurrents: Russia and the West	Such writers as Gogol, Dostoevsky, Turgenev, Tolstoy and Chekhov, while fiercely proud of their Russian literary heritage, also learned about the craft of fiction from Western writers. This course will study representative works in response to the West and to such trends as the impact of Napoleon, the rise of the city and the changing role of women. Readings and emphases will vary. Usually offered in even years. Ms. Miller
Italian		Russian 130a. Nineteenth Century Russian Literature	A comprehensive survey of the major writers and themes of the 19th century, including Gogol, Turgenev, Dostoevsky, Tolstoy, Chekhov and others. Conducted in English. Readings available in Russian and in English translation. Usually offered in even years. Ms. Miller
Italian 110a. Introduction to Italian Literature	This course will be a survey of the masterpieces of Italian literature from Dante to the present. It is designed to introduce the student to the major literary periods, styles, genres, and to present an overview of the history of the literature. All reading, writing, lectures and discussion will be in Italian. Reading in Dante, Boccaccio, Petrarca, Machiavelli, Leopardi, Verga and Pirandello. Usually offered in even years. Mr. Lansing	Russian 134b. Stories and Plays of Chekhov	A detailed chronological investigation of the evolution of Chekhov's art — a blend of realism and symbolism. Emphasis on the major themes, method of characterization and literary style of the stories; his innovative techniques in drama; certain thematic parallels between the late stories and the plays. Conducted in English with readings available in Russian for concentrators and in English translation. Usually offered in even years. Ms. Miller
Italian 110b. Modern Italian Literature	Analysis of major works by Verga, Pirandello, Svevo, Moravia, Lampedusa, Pavese and Vittorini with respect to the political, economic and social problems of post-Risorgimento Italy. Lectures, discussion, readings and written work in Italian. Usually offered in even years. Mr. Lansing	Russian 135a. The Short Story in Russia	This course will focus on the great tradition of the short story in Russia. This genre has always invited stylistic and narrative experimentation as well as being a vehicle for the striking, if brief, expression of complex social, religious and philosophical themes. The works of such great prose innovators as Pushkin, Gogol, Turgenev, Dostoevsky, Leskov, Tolstoy and Chekhov offer confirmation of this notion. Usually offered in even years. Ms. Miller

Russian 136b. The Literature of Autobiography, Childhood Reminiscence and Confession	Despite the difficulties in attempting a genuine autobiography, childhood reminiscence or confession, Russian writers from Avvakum on have undertaken to express themselves authentically within these forms. Yet many of them, recognizing the problematic nature of a sincere first person utterance, have made fictional use of it to exploit and portray moral paradoxes. Readings will be drawn from Avvakum, Tolstoy, Dostoevsky, Nabokov and others. Usually offered in even years. Ms. Miller.	Russian 148b. A Survey of Twentieth-Century Russian Theater: Chekhov to the Present	History and development of Russian drama from Chekhov to the present. Conducted in English. Readings available in Russian and in English translation. Usually offered in odd years. Mr. Szulkin
Russian 137a. The Heroine in Nineteenth-Century Russian Literature	The remarkable women who populate prose fiction in 19th-century Russia are virtually all the creations of male writers who often affirm the very conventions and moralities their female characters try to transcend. This course will examine questions of female representation and identity in readings from Pushkin, Lermontov, Gogol, Aksakov, Concharov, Turgenev, Dostoevsky, Tolstoy and Chekhov. Usually offered in odd years. Ms. Miller	Russian 149b. Twentieth-Century Russian Literature, Art and Theater	We will focus on the three decades 1900-1930 and their various artistic movements (Futurism, Constructivism, Imagism, Cubism, Dada, Surrealism) as reflected in literature, painting and theater. We will explore the interrelationships between these artistic movements and the political scene. Readings will illustrate the richness of this modern period of Russian culture. Conducted in English. Readings in English translation. Usually offered in odd years. Mr. Szulkin
Russian 146a. Dostoevsky	A comprehensive survey of Dostoevsky's life and works, with special emphasis on his five major novels. Conducted in English. Readings available in Russian for concentrators, and in English translation. Usually offered in odd years. Ms. Miller	Spanish Spanish 111b. Introduction to Spanish American Literature	Study of major periods, movements, works and authors from the Conquest, through the wars of independence, to the middle of the 20th century. Usually offered in odd years. Staff
Russian 147b. Tolstoy	This course will study the major novels and short stories of Leo Tolstoy (such as The Cossacks, Family Happiness, War and Peace, Anna Karenina , "The Death of Ivan Ilych," "Master and Man," "Father Sergius") against the backdrop of 19th-century history and with reference to 20th-century critical theory. Usually offered in even years. Ms. Miller	Spanish 112b. Indigenous Literatures of Latin America	Study of poetry, fiction and theater, as well as historical accounts and mythical narrative, produced by the indigenous peoples of Latin America, from pre-Columbian to the contemporary period. Usually offered in even years. Staff
Russian 148a. Survey of Russian Theater from 1719 to 1917	Social, political and literary forces that were instrumental in the development of Russian theater from the late 18th century to the Bolshevik Revolution. Major emphasis given to important plays and playwrights of the 19th century, such as Fonvizin, Griboedov, Pushkin, Gogol, Ostrovsky, Tolstoy, Chekhov, Gorky and Andreyev. Usually offered in odd years. Mr. Szulkin	Spanish 120a. Cervantes: In Depth Study of Don Quixote	A reading for fun and critical insight into what is often called "the first modern novel," Miguel de Cervantes' Don Quixote . We will also discuss various literary antecedents to this famous work, and some reasons for its reputation as a major influence on subsequent fiction throughout Europe. Usually offered in even years. Ms. Fox
		Spanish 125b. Heart of the Golden Age	The most intense period of Spain's Renaissance-Baroque literary genius, 1543-1642, produced in print and on the stage a series of enduring literary achievements. Readings include ballads, and lyric poetry of Garcilaso, San Juan, Góngora; the prose of the Abencerraje , Cervantes' Novelas ejemplares , and Quevedo's picaresque novel, El buscón ; and the innovative drama of Lope, Tirso and Calderón. Usually offered in odd years. Ms. Fox

Spanish 140a. Masters of Spanish Poetry	Usually offered in even years. Mr. Yglesias	Spanish 165a. Latin American Literature and Culture	A seminar for seniors and graduate students that will focus on fundamental authors, movements and themes to develop a research-oriented discussion of textual, socio-historical and aesthetic problems, ideas and poetics. Usually offered in even years. Staff
Spanish 160a. Studies in Latin American Literature I	The new Latin American narrative is the focus of this course. Texts by Borges, Rulfo, Cortazar, Carpentier, Garcia Marquez, Fuentes, among others. Discussion of their innovative qualities, as well as in relation to their cultural and historical framework. Usually offered every year. Staff	Spanish 170b. The Generation of 1898	Readings from Unamuno, Baroja, Azorin, Machado, Ganiivet. Usually offered in odd years. Mr. Larsen
Spanish 160b. Studies in Latin American Literature II	Topic varies from year to year. Usually offered every year. Staff	Spanish 180b. Twentieth-Century Spanish Literature	A study of major writers, works, styles and movements of the 20th century, in Spanish. Usually offered in even years. Mr. Larsen
Spanish 161a. Masters of Modern Latin American Poetry	Development of 20th-century poetics through the works of Dario, Vallejo, Neruda and Paz. Usually offered in even years. Mr. Yglesias	Spanish 190a. Latin American Fiction in Translation	Much of the most vital fiction of the last thirty years is to be found in the Third World, especially that lying to the south of us. This course will consider a number of major Latin American novels and stories in an effort to identify significant trends of divergence and convergence with regard to the mainstream of Western narrative. Usually offered in even years. Mr. Yglesias

Mathematics

Objectives

The graduate program in mathematics is designed primarily to lead to the Doctor of Philosophy degree. The formal course work is devoted to giving the student a broad foundation for work in modern pure mathematics. An essential part of the program consists of seminars on a variety of topics of current interest in which mathematicians from Greater Boston often participate. In addition, the Brandeis-Harvard-MIT Mathematics Colloquium gives the student an opportunity to hear the current work of eminent mathematicians from all over the world.

Admission

The general requirements for admission to graduate work in mathematics are the same as those for the Graduate School as a whole. The department has available a variety of fellowships and scholarships for well-qualified students. To be considered for such financial support the student should submit an application by February 15.

Faculty

Professor
Jerome P. Levine,
Chair:
Differential topology.
Knot theory and
related algebra.

Professor
Mark Adler:
Analysis: differential
equations, completely
integrable systems.

Professor
Maurice Auslander:
Noncommutative
algebra. Homological
algebra.

Professor
Edgar H. Brown, Jr.:
Algebraic topology:
manifolds, cobordism,
surgery, homotopy
theory.

Professor
David A. Buchsbaum:
Commutative algebra.
Homological algebra.

Professor
David Eisenbud,
Graduate Advisor:
Commutative algebra.
Algebraic geometry.
Knot theory and
singularities of
complex varieties.

Professor
Michael Harris:
Arithmetic of Abelian
varieties over number
fields. Class field
theory. P-adic
representation theory.
L-functions.

Professor
Kiyoshi Igusa:
Algebraic K-theory.

Professor
Harold I. Levine:
Differential topology.
Singularities of
differential maps.

Professor
Teruhisa Matsusaka:
Algebraic geometry.
Classification and
deformations of
algebraic varieties.

Professor
Alan L. Mayer:
Classical algebraic
geometry and related
topics in mathematical
physics.

Professor
Paul B. Monsky:
Number theory.
Arithmetic algebraic
geometry.

Professor
Richard S. Palais:
Nonlinear partial
differential equations.
Calculus of variations
in geometry of
mathematical physics.
Transformation
groups.

Professor
Gerald W. Schwarz:
Algebraic groups.
Transformation
groups.

Visiting Professor
Pierre van Moerbeke:
Stochastic processes.
Korteweg-deVries
equation. Toda
lattices.

Associate Professor
Ira Gessel:
Theoretical computer
science, enumerative
combinations.

Associate Professor
Daniel Ruberman:
Geometric topology:
knots and low
dimensional
manifolds.

Assistant Professor
Kathryn Lesh:
Algebraic topology:
unstable homotopy
theory.

Assistant Professor
Kenji Matsuki:
Algebraic geometry,
classification of higher
dimensional varieties.

Assistant Professor
Takahiro Shiota:
Analysis: partial
differential equations.

Assistant Professor
Kari Vilonen:
Intersection homology.
Perverse sheaves.
D-modules.

Instructor
Wolfram Cerdes:
Differential topology.
Algebraic K-theory.

Degree Requirements

Master of Arts

1. One year's residence as a full-time student.
2. Successful completion of an approved schedule of courses.
3. Satisfactory performance in the basic courses in algebra, analysis, topology and geometric analysis — or equivalent examinations (see Program of Study).
4. Proficiency in reading French, German or Russian.

Doctor of Philosophy

1. Two years' residence as a full-time student.
2. Successful completion of an approved schedule of courses.
3. Superior performance in the basic courses in algebra, analysis, topology and geometric analysis — or equivalent examinations (see Program of Study).
4. Participation in the second-year seminar.
5. Superior performance in the qualifying examination.
6. Proficiency in reading two of French, German or Russian.
7. Doctoral dissertation approved by the department.
8. Successful defense of the dissertation.

Program of Study.

The normal first year of study consists of Mathematics 101a and b, 111a and b and 121a and b. In exceptional circumstances and only with the permission of the graduate advisor, a student with superior preparation may omit one or more of these courses and elect higher level courses instead. In this case he or she must take an examination in the equivalent material during the first year. The second year's work will normally consist of Mathematics 110a and higher level courses in addition to preparation for the qualifying examinations described below and participation in the second-year seminar. Upon completion of the qualifying examinations, the student will choose a dissertation advisor and begin work on a thesis. This should be accompanied by advanced courses and seminars.

Qualifying Examination.

The qualifying examination consists of two parts: a major examination and a minor examination. Both are normally taken in the latter part of the second year but may occasionally be postponed until early in the third year. For the major examination the student will choose a limited area of mathematics, e.g., differential topology, or several complex variables, or ring theory — and a major examiner from among the faculty. Together they will plan a program of study and a subsequent examination in that material. The aim of this study is to prepare the student for research toward the Ph.D. The minor examination will be more limited in scope and less advanced in content. The procedures are similar to those for the major examination, but its subject matter should be significantly different.

Admission to Candidacy.

To be admitted to candidacy for the Ph.D. degree in mathematics, the student must have successfully completed the qualifying examination, must demonstrate proficiency in reading French, German or Russian and must be recommended for candidacy by the department.

Dissertation and Defense.

The doctoral degree will be awarded only after the submission and acceptance of an approved dissertation and after the successful defense of that dissertation.

Courses of Instruction

Mathematics 101a. Algebra I

Groups, rings, modules. Galois theory, affine rings and rings of algebraic numbers. Multilinear algebra. The Wedderburn Theorem. Other topics as time permits.

Usually offered every year.

Mr. Mayer

Mathematics 101b. Algebra I

A continuation of Mathematics 101a.

Usually offered every year.

Mr. Monsky

Mathematics 110a. Geometric Analysis

Manifolds, tensor bundles, vector fields and differential forms. Frobenius theorem. Integration, Stoke's theorem and deRham's theorem.

Usually offered every year.

Mr. Igusa

Mathematics 110b. Geometric Analysis

The correspondence between Lie groups and Lie algebras. Exponential map, homomorphisms, Lie subgroups, and homogeneous spaces. Representations of compact Lie groups.

Usually offered every year.

Mr. Schwarz

Mathematics 111a. Real Analysis	Measure and integration. LP spaces, Banach spaces, Hilbert spaces. Radon Nikodym, Riesz representation and Fubini theorems. Fourier transforms. Usually offered every year. Mr. Palais	Mathematics 203a. Number Theory	Some of the following topics will be covered: basic algebraic number theory (number fields, Ramification theory, class groups, Dirichlet unit theorem); zeta and L-functions (Riemann-function, Dirichlet L-functions, primes in arithmetic progressions, prime number theorem); class field theory; modular functions and modular forms; cyclotomic fields; automorphic forms on Adele groups. Usually offered every year. Mr. Monsky
Mathematics 111b. Complex Analysis	The Cauchy integral theorem, calculus of residues and maximum modulus principle. Harmonic functions. The Riemann mapping theorem and conformal mappings. Other topics as time permits. Usually offered every year. Staff	Mathematics 203b. Number Theory	A continuation of Mathematics 203a. Usually offered every year. Staff
Mathematics 121a. Topology I	Point set topology, fundamental group, covering spaces. Simplicial complexes, elementary homology and cohomology theory with applications. Manifolds and orientation, cup and cap products, Poincaré duality. Other topics as time permits. Usually offered every year. Mr. Brown	Mathematics 211a. Topics in Differential Geometry and Analysis	Usually offered every year. Mr. Mayer
Mathematics 121b. Topology I	A continuation of Mathematics 121a. Ms. Lesh	Mathematics 211b. Topics in Differential Geometry and Analysis	Usually offered every year. Mr. Adler
Mathematics 150a. Combinatorics	Emphasis is on enumerative combinatorics. Generating functions and their applications to counting graphs, paths, permutations and partitions. Bijective counting, identities, Lagrange inversion and Möbius inversion. Usually offered in odd years. Mr. Gessel	Mathematics 221a. Topology II	Elementary homotopy theory, fibrations, obstruction theory and spectral sequences. Usually offered every year. Staff
Mathematics 200a. Second Year Seminar	Usually offered every year. Mr. Schwarz	Mathematics 221b. Topology II	Differential topology: transversality and characteristic classes. Geometric definitions of cobordism, computation via homotopy theory. Other topics as time permits. Usually offered every year. Mr. Brown
Mathematics 201a. Topics in Algebra	Commutative algebra. Usually offered every year. Mr. Buchsbaum	Mathematics 291d. Fellowship of the Ring — Seminar in Commutative Algebra	Research seminar; not normally taken for credit. Usually offered every year. Staff
Mathematics 201b. Topics in Algebra	Usually offered every year. Staff	Mathematics 293d. Topology Seminar	Research seminar; not normally taken for credit. Usually offered every year. Staff
Mathematics 202a. Algebraic Geometry I	Usually offered every year. Mr. Eisenbud		
Mathematics 202b. Algebraic Geometry I	A continuation of Mathematics 202a. Usually offered every year. Mr. Eisenbud		

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Mathematics 294d. Differential Geometry Seminar	Research seminar; not normally taken for credit. Usually offered every year. Mr. Palais	Mathematics 321b. Topology III	A continuation of Mathematics 321a. Usually offered every year. Mr. Ruberman
Mathematics 295d. Algebraic Geometry Seminar	Research seminar; not normally taken for credit. Usually offered every year. Staff	Mathematics 324a. Advanced Topics in Lie Groups and Representation Theory	Usually offered in odd years. Staff
Mathematics 296d. Seminar in Artin Rings and Representation Theory	Research seminar; not normally taken for credit. Usually offered every year. Staff	Mathematics 324b. Advanced Topics in Lie Groups and Representation Theory	A continuation of Mathematics 324a. Usually offered in odd years. Staff
Mathematics 297d. Number Theory Seminar	Research seminar; not normally taken for credit. Usually offered every year. Staff	Mathematics 326a. Topics in Algebraic Groups and Invariant Theory	Usually offered every year. Mr. J. Levine
Mathematics 299a and b. Readings in Mathematics	Usually offered every year. Staff	Mathematics 326b. Topics in Algebraic Groups and Invariant Theory	A continuation of Mathematics 326a. Usually offered every year. Mr. J. Levine
Mathematics 302a. Topics in Algebraic Geometry	Complex and algebraic theory of Abelian varieties. Usually offered in even years. Mr. Matsuki	Mathematics 399a and b. Readings in Mathematics	Usually offered every year. Staff
Mathematics 302b. Topics in Algebraic Geometry	Moduli spaces of curves. An introduction to their construction and to the geometry of M_g and $M_g, 1$ for g . Usually offered in even years. Mr. Vilonen	All graduate courses will have organizational meetings the first week of classes.	
Mathematics 311a. Differential and Pseudodifferential Operators on Vector Bundles	Usually offered every year. Staff	Mathematics 401d-417d. Research	Independent research for the Ph.D. degree. 401d. Mr. Auslander 410d. Mr. Eisenbud 402d. Mr. Brown 411d. Mr. Mayer 403d. Mr. Buchsbaum 412d. Mr. Van 404d. Mr. H. Levine Moerbeke 405d. Mr. J. Levine 413d. Mr. Igusa 406d. Mr. Matsusaka 414d. Mr. Adler 407d. Mr. Monsky 415d. Mr. Harris 408d. Mr. Palais 416d. Mr. Gessel 409d. Mr. Schwarz 417d. Mr. Ruberman
Mathematics 311b. Advanced Topics in Analysis	Usually offered every year. Mr. Van Moerbeke		
Mathematics 321a. Topology III	Usually offered every year. Mr. Ruberman		

Music

Objectives

The graduate program in music, leading to the degrees of Master of Fine Arts and Doctor of Philosophy, is designed to provide a command of the craft of composition and an understanding of the nature, structural basis and historical development of music.

The following general fields of study are offered in music:

1. **Composition and Theory.** This program, emphasizing composition and supported by studies in theory and analysis, leads to the degrees of Master of Fine Arts and Doctor of Philosophy.

2. **Musicology.** In this program students may elect to emphasize or concentrate in one of two different programs of study, **music history** or **theory and analysis**. In the **music history** program, a variety of techniques and methodologies, including source studies, style development and historiography are applied to different repertoires and historical problems. The program in **theory and analysis** features works in the history of theory from the medieval period to the present, as well as analytic work in the context of theory construction and the evaluation of tonal as well as contemporary analytic models. This program leads to the degrees of Master of Fine Arts and Doctor of Philosophy.

Students must specialize in one of these areas, but composers are expected to undertake some work in music history and historians to acquire some competence in tonal writing.

Admission

Only a limited number of students will be accepted. The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to this area of study.

Applicants for study in **musical composition and theory** are required to submit, in addition to a transcript of their undergraduate records, evidence of qualification in the form of examples of original work in musical composition and advanced work in musical theory. Applicants for admission in **musicology** should submit examples of their prose writing on music as evidence of their ability to handle the language and specialized vocabulary. Undergraduate theses or term papers will be satisfactory. Musicology applicants wishing to specialize in **theory and analysis** should also submit examples of advanced work in musical theory. This work should be submitted together with the formal application for admission.

All applicants are expected to have some proficiency at the piano or an orchestral instrument. Information about this should be furnished when making formal application. A departmental written test in basic musicianship and analysis will be sent to all applicants; answers are to be submitted by mail on or before February 15.

Admission is granted for one academic year at a time. Students in residence must make formal application for readmission to the department on or before the final date specified in the Academic Calendar for filing "Application for Financial Aid." Readmission will be refused in cases where students have not demonstrated a capacity for acceptable graduate work.

Faculty

Professor Robert L. Marshall, Chair	Associate Professor Eric Chafe	Assistant Professor Harry Ballan	Lecturer with rank of Assistant Professor Armand Qualliotine	Performing Artists-in-Residence Sandra Dackson Richard Ford Sarah Mead Lawrence Siegel	Lydian String Quartet: Judith Eissenberg Mary Ruth Ray Rhonda Rider Daniel Stepner
Professor Martin Boykan	Associate Professor James D. Olesen	Assistant Professor Margot Fassler	Lecturer David Kopp		
Professor Allan R. Keiler	Associate Professor Jessie Ann Owens				
Professor Yehudi Wyner	Assistant Professor Allen L. Anderson				

Degree Requirements	For candidates in composition.	Composition students are required to take (1) proseminars and seminars in composition, (2) proseminars and seminars in tonal and nontonal analysis, (3) a proseminar in music history or its equivalent.
Master of Fine Arts	Examinations.	Shortly after their arrival, new graduate students will be expected to take an examination in the standard literature of music. Where deficiencies exist, examinations will be repeated.
Language Requirements.	Candidates for the master's degree in Musical Composition and Theory must possess a reading knowledge of one language — French, German or Italian.	Before the end of their second year of study, candidates for the degree of Master of Fine Arts must demonstrate their competence by means of a written general examination.
	Candidates for the master's degree in History of Music must possess a reading knowledge of French and German. Upon petition to the department substitutions for French will be considered.	The following timetable is suggested for major general examinations: For candidates in composition , the composition examination may be taken during the first year and repeated if necessary in the second; the analysis portion of the examination will normally be taken during the second year. Examinations may be repeated in the third year only in the case of a student not proceeding beyond the master's degree. For candidates in musicology , major general examinations must be passed by the end of the second year; they may be repeated in the third year at the discretion of the faculty.
Instrumental Proficiency.	Foreign language course credits will not in themselves constitute fulfillment of the language requirements for advanced degrees. All candidates must pass language examinations set or approved by the music faculty and offered periodically during the academic year. Students are urged to take these examinations at the earliest feasible date. Musicology students should pass the German reading examination by the end of their first year in residence. In case of failure, an examination may be taken more than once.	Thesis.
Residence Requirements.	At least moderate proficiency at the piano is required of all candidates for advanced degrees. Twelve semester courses at the graduate level, completed with distinction, and a thesis are required of all candidates.	Candidates for the degree of Master of Fine Arts in Music are required to submit a thesis. For candidates in musical composition , this will consist of a musical composition, its scope to be approved by the music faculty. For candidates in musicology , it will be an analytical or historical study on a topic acceptable to the music faculty. Candidates in the history of music may submit, in lieu of a separate thesis, revised copies of two seminar papers that have been certified by the seminar instructor and at least one other faculty member as demonstrating a high degree of competence in research and writing. Two copies of the thesis or composition must be submitted to the department chairman in final form no later than December 1 for a February degree or April 1 for a May degree.
For candidates in musicology.	The department normally allows credit for no more than two semester courses taken at another institution. In general, the program of course work is completed in two academic years. It is suggested that students pursue no more than three full courses in any one year. The musicology program consists of three categories of courses: (1) proseminars in music history, (2) seminars in music history, (3) seminars in history of theory. Within each category courses are offered in the six principal historical periods of Western music from the middle ages to the 20th century (medieval, Renaissance, baroque, classical, romantic, modern). The proseminars survey an array of topics illustrating the representative avenues of research and methodological approaches. Seminars typically concentrate on a single topic. Courses in analysis similarly belong to three categories: (1) proseminars and seminars in tonal analysis, (2) proseminars and seminars in nontonal analysis, (3) advanced analysis. Musicology students are required to take (1) at least one course in each of five historical periods, in any combination of proseminars or seminars; (2) at least two semesters of analysis; (3) the proseminar in composition or its equivalent.	

Doctor of Philosophy	Admission to the doctoral program is normally granted at the end of the second year of residence and is determined by the student's performance in course work and general examinations. For candidates in music history, acceptance may be deferred pending repetition of portions of the major examinations.		work completed with distinction. For candidates in composition and theory, a semester of Music 200 or 299 is suggested; for candidates in history, an additional semester of Music 227.
Residence Requirements.	A minimum of 16 semester courses at the graduate level, completed with distinction, are required of all candidates.	Admission to Candidacy.	After meeting their language, residence and general examination requirements, candidates for the Ph.D. must pass a special oral qualifying examination.
	In general, the program of course work will be completed in three academic years.		Students will be admitted to candidacy for the Ph.D. degree upon successful completion of the written and oral qualifying examinations, fulfillment of the language requirements, and the approval of a dissertation topic. Candidates for the degree of Doctor of Philosophy in Musicology are required to submit a dissertation proposal by the end of the first semester of their third year in residence. An oral defense of the proposal will take place during the course of the second semester of the third year.
	Applicants who have done graduate work elsewhere may apply for transfer of credit for such work; a maximum of one year of residence may be granted. Candidates for the doctoral degree in musicology will normally take, in addition to two one-semester courses (proseminar or seminar) beyond those taken for the master's degree, two semesters of dissertation research (Music 401-411). This course may be taken with one or more instructors. In general, part of the time spent during the third year on dissertation preparation will involve discussions with several faculty members. Candidates for the doctoral degree in composition will normally take, in addition to courses taken for the master's degree, two semesters of the seminar in composition and two seminars in advanced analysis.	Dissertation.	Candidates for the degree of Doctor of Philosophy in Composition must submit an original musical composition and a thesis on a theoretical or analytical subject. Candidates for the degree of Doctor of Philosophy in Musicology must submit a dissertation on a historical, theoretical or analytical subject. Two copies of the doctoral dissertation, as well as an abstract of the dissertation not to exceed 350 words in length, should be submitted to the department or committee chairman no later than December 1 for a February degree and April 1 for a May degree of the academic year in which the Ph.D. degree is to be conferred.
Language Requirements.	Candidates for the doctoral degree in the musicology must possess a reading knowledge of French and German. Upon petition to the department, substitutions for French will be considered. Candidates in composition and theory must possess a reading knowledge of one language approved by the department.		Written dissertations should demonstrate the competence of the candidate as an independent investigator, his or her critical ability and effectiveness of expression. Upon completion of the dissertation, the candidate will be expected to defend it in an oral examination.
Instrumental Proficiency.	At least moderate proficiency at the piano is required of all candidates.		
Examinations.	Candidates for the Ph.D. degree have no additional written examination requirements in their major field beyond those for the M.F.A. In the minor field, doctoral-level examinations may, if desired, be replaced by the option of an additional semester of course		

Courses of Instruction

Except in the rarest circumstances, graduate credit is not allowed for courses numbered below Music 165.		Music 182a. Topics Before 1750	Analysis of Baroque music with special emphasis on Monteverdi, Handel and Bach.
Music 168a. Orchestration	The instruments of the orchestra: their construction, ranges and playing techniques, with a consideration of their use by major composers; the methods of writing effectively for present-day instruments, individually and in combination; the mechanics of reading and writing a score. Written exercises, analysis of scores, study of recorded performances and a live demonstration.		Usually offered every third year. Staff
	Usually offered every third year. Staff	Music 195a. Electronic Music	Composition and recording of electronic music. Technical electronics as they apply to musical problems. Usually offered every year. Staff

93	Music		
Music 197a. Tutorial in the Analysis of Tonal Music	The analysis of selected pieces of the tonal repertory. Students will work on a number of different analytic techniques and skills. Usually offered every third year. Mr. Keiler	Music 205a. Proseminar in Music of the Nineteenth Century	A broad study of the principal stylistic developments and musical genres of the 19th century; topics discussed would be, e.g., the significance of Beethoven on the musical thinking of the 19th century, the rise of national schools of composition, especially opera, program music and its aesthetic and compositional bases. Usually offered every third year. Mr. Keiler
Music 197b. Tutorial in the Analysis of Twentieth-Century Music	Basic analytical problems of the music of the 20th century approached through detailed study of a few representative works. Usually offered every third year. Staff	Music 206b. Proseminar in the Music of the Twentieth Century	An examination of the music of the 20th century from a variety of viewpoints, historical, theoretical and analytical. Topics will include several of the following: tonality and atonality in Germany and Austria, 1899-1923; twelve-tone music and serialism; the French and Russian avant-garde; neo-classicism; experimental music in America; minimalism, neo-romanticism and eclecticism; and recent music. In addition to covering broader historical issues, the course will involve some close analysis of selected works. Usually offered in even years. Mr. Ballan
Music Colloquium	Discussions of special topics led by the faculty and occasional guests. Some of the sessions will include performances of new works. Required of all graduate students. <i>Non-credit</i> . Usually offered every year. Staff and Visiting Lecturers	Music 207a. Proseminar in Analysis	Basic study of the means by which a compositional form is realized; attention will be focused on motives, groups and phrases as well as on rhythmic and metric considerations. Introduction to linear analysis. Usually offered in even years. Staff
Music 200b. Proseminar in Medieval Music	Broad coverage of the principal topics and research techniques of medieval music; structure of the liturgy, chant notation, oral transmission theory, tropes and sequences, polyphonic notation, rhythmic modes. Introduction to standard bibliographic tools including editions, facsimiles, microfilms, liturgical books and reference books. Usually offered every third year. Ms. Fossler	Music 207b. Proseminar in Analysis	A continuation of Music 207a. Usually offered in even years. Staff
Music 201a. Proseminar in Music of the Renaissance	Usually offered in even years. Ms. Owens	Music 208b. Problems in Cultural Historiography	Usually offered in odd years. Mr. Keiler
Music 202b. Proseminar in Music of the Baroque	Usually offered every third year. Mr. Chafe	Music 209a. Seminar in Psychoanalysis and Biography: The Psychoanalytic Study of the Artist	The foundations of psychoanalytic theory in its contribution to the understanding of the artist. Topics to be considered include the relation of the artist to his work as seen from the perspective of psychoanalysis, creativity and the creative process. In addition to the pioneering work of Freud, Rank and Kris, more contemporary issues in psychoanalytic theory, for example, ego psychology, will be explored. The possible directions of applied psychoanalysis for musicology will be considered. Usually offered every third year. Mr. Keiler
Music 203b. Advanced Musical Analysis	Usually offered in even years. Mr. Ballan	Music 210a. Seminar in Music of the Middle Ages	Usually offered in even years. Ms. Fassler
Music 204b. Proseminar in Music of the Eighteenth Century	In addition to tracing the evolution of the principal genres (e.g., sonata, symphony, string quartet, opera buffa, opera seria), the course will assess the historical position of the major figures from Bach and Handel to Mozart and Haydn. Particular emphasis will be placed on understanding the phenomenon of the "style shift" from baroque to classical style. Usually offered in odd years. Mr. Marshall		

Music 211d. Seminar in Renaissance Musical Sources	Usually offered in odd years. Ms. Owens	Music 221d. Proseminar in Schenkerian Analysis	The systematic study of the approach of music analysis developed by Heinrich Schenker. The basic concepts of diminution, voice leading, prolongation and structural level are studied and their significance is applied to smaller examples as well as the principal longer forms of tonal music. The student will gradually master all of the notational techniques of linear analysis as they are applied to the tonal repertory. Usually offered in even years. Mr. Keiler
Music 212a. Seminar: Theory of Modality and Tonality	An investigation of various concepts related to tonal organization (such as mode, key, system, solmization) based on a close reading of theoretical treatises from the 15th through the 17th centuries. Usually offered in even years. Ms. Owens		
Music 213b. Seminar in Music of the Renaissance	Usually offered in even years. Ms. Owens	Music 224d. Seminar in Medieval Music Theory	Usually offered every third year. Ms. Fassler
Music 214b. Seminar: Baroque Topics	An in-depth investigation of one selected topic in baroque music. Typical topics include the Monteverdi madrigals, 17th-century instrumental music, the Bach Passions. The methodology employed will vary according to the subject; emphasis will be given to more recent research in most cases. Usually offered every third year. Mr. Chafe	Music 225. Seminar in Baroque Theory	Usually offered every third year. Staff
Music 215b. Seminar: The Bach Sources	Usually offered in even years. Mr. Marshall	Music 226a. History and Literature of Western Music Theory: Baroque to 1850	Usually offered in odd years. Mr. Keiler
Music 216d. Seminar: The "Origins of the Classical Style"	Usually offered every third year. Mr. Marshall	Music 226b. History and Literature of Western Music Theory: 1850 to the Present	Usually offered in even years. Mr. Keiler
Music 217a. Seminar: Recent Developments in Mozart Research	The purpose of the course will be to assess the current state of the several areas of Mozart research; biography, source studies, work analysis, performance practice and the composer's music-historical position in the development of the "classical style." Usually offered every third year. Mr. Marshall	Music 227a. Proseminar in Theory and Composition	Technical projects in theory and composition; baroque counterpoint; canon, fugue and chorale prelude. Usually offered every year. Staff
Music 218b. Seminar in the Music of the Nineteenth Century	Usually offered in even years. Mr. Keiler	Music 227b. Proseminar in Theory and Composition	Composition in classical forms with particular emphasis on sonata form. Usually offered every year. Staff
Music 219a. Seminar: Wagner	Usually offered in even years. Mr. Chafe	Music 228a. Seminar in Twentieth-Century Techniques	Written exercises utilizing some of the newer compositional techniques developed in the 20th century. Usually offered in odd years. Staff
Music 220a. Seminar: The German Post-Romantic Period	Usually offered in odd years. Mr. Chafe	Music 223a. Topics in Analysis	Usually offered every year. Staff
		Music 223b. Topics in Analysis	Usually offered every year. Staff

Music 234a. Analysis of Tonal Music	Detailed examination of a few complete works of the tonal repertoire (from Bach to Brahms). Usually offered in even years. Staff	Music 292a. Seminar in Composition	Group meetings and individual conferences. Opportunities for the performance of student works will be provided. Usually offered every year. Section 1: Mr. Boykan Section 2: Mr. Wyner
Music 234b. Analysis of Extended Tonal Music	Works in this course will be selected from the late 19th and 20th centuries. Composers such as Wagner, Wolf, Debussy, early Schoenberg, Bartok and Stravinsky. Usually offered in even years. Staff	Music 292b. Seminar in Composition	Usually offered every year. Section 1: Mr. Boykan Section 2: Mr. Wyner
Music 246a. Stravinsky	Usually offered every fourth year. Staff	Music 299a. Individual Research and Advanced Work	Usually offered every year. Staff
Music 270a. Seminar in Serial Music	Twelve-tone procedures in Schoenberg, Webern and more recent composers. The course will be primarily concerned with the realization of serial technique in specific compositions. Attention will be focused on questions of articulation, phrasing, form and harmonic distinction. Usually offered in odd years. Mr. Boykan	Music 299b. Individual Research and Advanced Work	Usually offered every year. Staff
Music 270b. Seminar in Serial Music	A continuation of Music 270a. Usually offered in odd years. Mr. Boykan	Music 401d-412d. Dissertation Research	Required of all doctoral candidates. 401d. Mr. Boykan 408d. Mr. Chafe 402d. Mr. Marshall 409d. Mr. Ballan 406d. Ms. Owens 411d. Mr. Anderson 407d. Mr. Keiler 412d. Ms. Fassler
Music 291b. Advanced Orchestration	Scoring as a means of projecting a musical idea; questions of phrasing, emphasis and musical pacing. Analysis of scores as well as written exercises. Live performances whenever possible. Usually offered in even years. Staff	Electronic Music Studios	Two studios with facilities for the composition of electronic music are available to qualified student composers. Director: Staff

The Philip W. Lown School of Near Eastern and Judaic Studies

The Lown School is the center for all programs of teaching and research in the areas of Judaic Studies, Ancient Near Eastern Studies and Islamic and Modern Middle Eastern Studies. The school includes the Department of Near Eastern and Judaic Studies, the Hornstein Program for Jewish Communal Service and the Cohen Center for Modern Jewish Studies. The Department of Near Eastern and Judaic Studies offers academic programs in the major areas of its concern. The

Hornstein Program is a professional training program leading to the Master of Arts degree in Jewish Communal Service. It makes full use of academic resources of the Department of Near Eastern and Judaic Studies and other departments in the university.

The Cohen Center for Modern Jewish Studies conducts, and serves to stimulate, research and teaching in Contemporary Jewish Studies, primarily in the field of American Jewish Studies.

Near Eastern and Judaic Studies

Objectives

The graduate program in Near Eastern and Judaic Studies, leading to the Master of Arts and Doctor of Philosophy degrees, is designed to train scholars and teachers in the various cultures of the Near East and of classical and modern Judaic civilization, and to advance scholarly research in these areas. This work is done mainly through study of the relevant languages and literatures and the interpretation of primary sources.

Admission

The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to this department.

Faculty

Professor Benjamin C. I. Ravid , Chair: Jewish history.	Professor Leon A. Jick : Contemporary Jewish history.	Professor Marshall Sklare : Sociology of the Jewish community.	Associate Professor Avigdor Levy , Director of Islamic and Middle Eastern Studies: Middle Eastern studies.	Adjunct Associate Professor Ruth Collan , Director, Hebrew language program.	Lecturer with rank of Associate Professor Gila Ramras-Rauch : Hebrew literature.
Professor Michael Fishbane : Biblical studies. Dead Sea Scrolls.	Professor Jehuda Reinharz : Modern Jewish history. History of Zionism.	Associate Professor Tzvi Abusch : Assyriology. Religions and cultures of the Ancient Near East.	Associate Professor Gary Tobin , Director of the Cohen Center for Modern Jewish Studies: Jewish community research and planning.	Assistant Professor Marc Brettler : Biblical studies.	Lecturer Charles Cutter : Judaic bibliography.
Professor Maryi. Fox , Director of the Lown School: Jewish philosophy. Rabbinic thought. Modern Jewish thought.	Professor Bernard Reisman : Jewish communal service.	Associate Professor Reuven Kimelman : Talmud and Rabbinic literature.	Visiting Associate Professor Stephen Geller : Biblical studies.	Visiting Assistant Professor Lawrence Perlman : Modern Jewish thought.	

Program of Study

Among the main fields in the area of Near Eastern and Judaic Studies in which courses are being given in the Graduate School are:	Jewish Philosophy, Medieval and Modern Islamic Philosophy Ottoman History The Modern Middle East Contemporary Jewish Studies
Bible and Ancient Near East Studies Jewish History Hebrew Literature Jewish Thought	The department regularly offers additional courses in related fields.

Degree Requirements		Language Requirements.	Candidates will be required to establish competence in Hebrew or Arabic as well as in two European languages, normally French and German. Additional languages may be required as necessary for research in each individual candidate's field.
Master of Arts			
Residence Requirements.	Two years of full-time residence will be required at the normal course rate of seven courses each academic year.	Comprehensive Examinations.	All candidates for the Ph.D. degree are required to pass three comprehensive examinations. The first examination in each field will be a written comprehensive qualifying examination covering the field as a whole. The second and third examinations will usually be oral and will cover more specialized subjects within the candidate's field.
Language Requirements.	Candidates will be required to establish competence in Hebrew or Arabic as well as in one European language, normally either French or German.		
Comprehensive Examination.	All candidates for the Master of Arts degree are required to pass a comprehensive examination.	Admission to Candidacy.	A student registered for studies leading to the Ph.D. degree becomes a candidate for that degree upon fulfilling the residence requirements, passing the comprehensive examinations, satisfying the language requirements and having a dissertation proposal approved by the department.
Thesis.	In the field of the Modern Middle East, students may be required to write a thesis, which must be submitted no later than April 1 of the year in which the degree is to be conferred. A thesis is not required in other fields in the Department of Near Eastern and Judaic Studies.	Dissertation and Defense.	The dissertation must demonstrate the candidate's thorough knowledge of the field and competence in independent research, and must constitute an original contribution to knowledge. Two copies of the dissertation, one of which must be the original typescript, are to be deposited in the office of the department chair no later than April 1 of the year in which the candidate expects to earn the degree. The student must successfully defend the dissertation at a final oral examination.
Doctor of Philosophy			
Residence Requirements.	Three years of full-time residence will be required at the normal rate of seven semester courses each academic year. Students who enter with graduate credit from other recognized institutions may apply for transfer credit. By rule of the Graduate School, a maximum of one year of credit may be accepted toward the residence requirement on the recommendation of the chair of the department.		

Courses of Instruction

NEJS 100b. The Book of Jeremiah	A study of the Book in English. The nature of biblical prophecy, the life and times of the prophet, his teachings and his distinctive ideas will be examined. Usually offered in odd years. Staff	NEJS 102a. Intermediate Literary Arabic	Readings in related classical and modern texts. Study of advanced grammatical and syntactical forms. Drills in pronunciation and composition. Usually offered every year. Ms. Karp
NEJS 101a. Introductory Literary Arabic	A first course in literary Arabic covering the essentials of grammar, reading, pronunciation, translation and composition. Usually offered every year. Ms. Karp	NEJS 102b. Intermediate Literary Arabic	A continuation of NEJS 102a. Usually offered every year. Ms. Karp
NEJS 101b. Introductory Literary Arabic	A continuation of NEJS 101a. Usually offered every year. Ms. Karp	NEJS 103a. Advanced Literary Arabic	This course is designed to help the student attain an advanced reading proficiency. The syllabus includes selections from classical and modern texts representing a variety of styles and genres. Usually offered every year. Mr. Levy

NEJS 103b
Advanced Literary Arabic

A continuation of NEJS 103a.
Usually offered every year.
Staff

NEJS 104a.
Islam: Civilization and Institutions

Consideration of major issues in Islamic history; appreciation of Islamic religion, civilization and culture; Islam's relations with other civilizations and its role in contemporary society.
Usually offered in odd years.
Mr. Levy

NEJS 104b.
Aramaic Dialectology

A survey of the linguistic history of Aramaic. Major changes and developments that took place in the various dialects will be reviewed through readings of the following texts: Old Aramaic Inscriptions, Elephantine Papyri, Biblical Aramaic and the Dead Sea Scrolls.
Usually offered in odd years.
Staff

NEJS 106d.
Elementary Ugaritic

Grammar and poetic texts will be read with constant reference to biblical literature.
Usually offered in even years.
Mr. Geller

NEJS 107b.
Themes and Ideas in Mesopotamian Literature

This course will introduce the students to the great literary genres of Mesopotamian civilization. Texts will be studied in translation and examined from literary and cultural points of view. Selections will be taken from such groups as epics, wisdom, historical prose, religious and love poetry.
Usually offered every fourth year.
Mr. Abusch

NEJS 108a.
Elementary Akkadian

Introduction to Akkadian grammar and lexicon and to Cuneiform script. This course is for beginning students of Akkadian.
Usually offered every year.
Mr. Abusch and Staff

NEJS 108b.
Comparative Grammar of Semitic Languages

An introduction to the internal relationships within the Semitic family and the distinctive linguistic features of its components. Grammatical and lexical similarities to Egyptian and other related languages of North Africa will be studied. Both the earliest documented ancient languages and contemporary spoken dialects will be considered.
Usually offered in odd years.
Mr. Geller

NEJS 109b.
Intermediate Akkadian

Review of grammar and reading of Old Babylonian inscriptions, laws and letters and literary texts.
Usually offered every year.
Mr. Abusch

NEJS 110b.
Medieval Philosophy

Averroes and Averroism: a study of the metaphysical ideas of one of the most influential figures in medieval philosophy and of the reactions to these ideas.
Usually offered in even years.
Staff

NEJS 111a.
Introduction to Biblical Literature

A survey of the Hebrew Bible and its main themes. Biblical books will be examined from the archaeological, literary and traditional perspectives, and will be compared with other ancient Near Eastern compositions. The question of whether there is one correct method of interpreting biblical texts will be explored. No knowledge of Hebrew is presumed.
Usually offered every year.
Mr. Brettler

NEJS 111b.
Genesis

Selected portions of the book will be read in Hebrew; textual, exegetical and literary study. Particular attention to the meaning and background of the primeval history.
Usually offered every fourth year.
Staff

NEJS 112b.
The Book of Isaiah

A textual and exegetical study; the historical background and leading ideas.
Usually offered in even years.
Staff

NEJS 113a.
Targum

A study of selections from Targumic literature including the newly discovered Palestinian materials. Critical study of the sources and their place among early versions and exegesis.
Usually offered in odd years.
Mr. Fishbane

NEJS 113b.
The Book of Exodus

Selected readings (in Hebrew): a detailed study of the Book, its structure, text and exegesis, historical background and problems, its leading themes and ideas.
Usually offered in even years.
Mr. Fishbane

NEJS 115a. Book of Deuteronomy	A close examination of the text of Deuteronomy with special attention to its religious, legal and compositional features. Traditions found in the Book of Deuteronomy will be compared with their counterparts elsewhere in the Pentateuch. The place of the Book of Deuteronomy in the history of the religion of Israel will be considered. Usually offered in even years. Mr. Fishbane	NEJS 119b. The Minor Prophets: Nahum, Habakkuk, Zephaniah	A textual and exegetical study; their historical background and leading ideas. Usually offered every fourth year. Staff
NEJS 116b. The Problem of Evil in Jewish Philosophy	Beginning with an analysis of the general philosophical/theological problem posed by the problem of evil, the course will continue with a systematic account of the main treatments of the problem in Jewish thought from antiquity to the present. Usually offered in even years. Mr. Fox	NEJS 120b. Intermediate Talmud	A more intensive study of selected portions of Treatise Sanhedrin not dealt with in NEJS 53b. Greater emphasis will be placed on the understanding of the classical commentaries. Students will be expected to develop the ability to work through a section of the text on their own. The analysis will deal with the issue of voluntary and compulsory arbitration, and the binding nature of gambling agreements. Usually offered every year. Mr. Kimelman
NEJS 117a. Job and the Problem of Evil	A close study of the Book of Job against the background of other biblical and ancient Near Eastern texts dealing with evil and its relationship to divinity and with the suffering of the righteous. The different theodicies will be considered with and between cultures. Other world religions will also be discussed. The text study will also introduce students to biblical poetics. Usually offered in even years. Mr. Fishbane	NEJS 121b. Aspects of the Apocalyptic Imagination	A comparative and analytic survey of the idea of Apocalypse through study of the literary images and expressions of world catastrophe and renewal in religious literature — from ancient Egyptian, Mesopotamian and Israelite antiquity through the classical and medieval expressions of Judaism, Christianity and Zoroastrianism. Among the topics to be considered will be mythic themes; temporal schemes; freedom and fatality; prophecy and messianism; relations between world origins and world destructions — renewals, and the varieties of cognitive or spiritual goals and crises involved. Aspects of the secularization of Apocalyptic and consciousness literature in modernity will also be treated. Usually offered in odd years. Mr. Fishbane
NEJS 117b. Dead Sea Scrolls	Studies in the exegetical literatures of Qumran with particular attention to a detailed examination of the so-called Peshier literature. Emphasis will be placed on interpretative techniques and a consideration of the historical background of the texts where pertinent. Usually offered in odd years. Mr. Fishbane	NEJS 122b. Story Telling in the Hebrew Bible	An examination of the narrative techniques of various biblical stories, including selections from Genesis, Judges, Samuel, Jonah and Ruth. Consideration of such topics as perspective, irony, mimesis and repetition of key words. The basic tools for biblical research will also be introduced. Prerequisite: Knowledge of biblical Hebrew. Usually offered in even years. Mr. Brettler
NEJS 118b. Book of Psalms	Selected readings of biblical psalms. Special attention will be paid to religious ideas, literary forms and poetics. Other examples of biblical poetry will be considered as well. Usually offered in even years. Mr. Fishbane	NEJS 123b. Classical Biblical Commentaries	An intensive study of the French and Spanish schools of Jewish commentators on selected books of the Bible. Usually offered in odd years. Mr. Fox
NEJS 119a. The Book of Ezekiel	Selected readings (in Hebrew). An intensive study of the exegetical problems, the historical background in the light of archaeological finds, the personality and biography of the prophet, the leading ideas and concepts of the book. Usually offered in even years. Staff		

NEJS 124a. Modern Jewish-Christian Religious Thought	<p>An examination of major Jewish and Christian thinkers of the 19th and 20th centuries, emphasizing their creative role in the formation of distinctive religious ideas. Primary source materials will be used for the assigned readings. The course will be jointly taught by two specialists in the respective areas of Jewish and Christian thought. One main concern will be to explore the varieties of ways in which the major religious thinkers respond to each other and to modern culture.</p> <p>Usually offered in even years.</p> <p>Mr. Fox</p>	<p>NEJS 127b. The Jewish Liturgy</p> <p>A study of the literary structure, theological framework and historical development of the Sabbath and daily liturgy. Emphasis will be placed on the interplay of the literary forms and theological ideas in each prayer, and within the flow of the complete service. Concomitantly, works on the problematics of prayer will be studied. Scholars such as Eliezer Berkovitz, Daniel Goldschmidt, Joseph Heinemann, Abraham Heschel, Issachar Jacobson and Trygve Kronholm will be read.</p> <p>Usually offered every fourth year.</p> <p>Mr. Kimelman</p>
NEJS 124b. Introduction to Jewish Mysticism	<p>A survey of the field of Jewish mysticism as reflected in its history, its major texts, its original ideas and its symbolic structures. In addition to the standard secondary works, readings will include selections from the primary sources such as the Zohar. While focusing on the history and development of the central themes in Jewish mysticism, the course will also be concerned with how to read a Jewish mystical text. All readings will be in English. There is no language prerequisite.</p> <p>Usually offered in even years.</p> <p>Mr. Fox</p>	<p>NEJS 129a. Foundations of Jewish Law</p> <p>A study of the theoretical foundations of Jewish law, the process of its codification and its continuing application to changing circumstances. Emphasis will be put on contemporary issues of Jewish law. Exploration of such topics as the relationship between law and morality, law and economics, law and social change and the place of Jewish law in the modern State of Israel. No language prerequisite. All required readings are in English.</p> <p>Usually offered in even years.</p> <p>Mr. Fox</p>
NEJS 125a. Literature: Mekhilta d'Rabbi Yishmael	<p>An analysis of the central ideas, the literary structure and the midrashic method of the Mekhilta.</p> <p>Emphasis will be placed on a close reading of the text with a view to developing the student's capacity to do an independent analysis of midrashic literature. Attention will also be given to the general background and development of Midrash.</p> <p>Usually offered in even years.</p> <p>Mr. Fox</p>	<p>NEJS 130b. The Philosophical and Religious Thought of Maimonides</p> <p>A comprehensive study of major aspects of the thought of Moses Maimonides, the greatest figure of the Jewish middle ages. Attention will be given to his contributions to Jewish law, as well as to his major philosophical and religious teachings.</p> <p>Usually offered in even years.</p> <p>Mr. Fox</p>
NEJS 125b. Midrashic Literature: Sifre Deuteronomy	<p>An analysis of the central ideas, the literary structures and the midrashic method of the Sifre Deuteronomy. Emphasis will be placed on a close reading of the text with a view to developing in the students the capacity to do an independent analysis of midrashic literature. Attention will also be given to the general background and development of Midrash.</p> <p>Usually offered every fourth year.</p> <p>Mr. Kimelman</p>	<p>NEJS 131a. Jewish Thought: From the Bible to Maimonides</p> <p>Dominant themes in Jewish philosophy and religious thought from biblical times to the medieval period and its classical formulations of Judaism.</p> <p>Usually offered every third year.</p> <p>Mr. Fox</p>
NEJS 126b. Aggadic Literature: Avot DeRabbi Natan	<p>A study of "talmudic" commentary to Mishnah Avot, which alone of the Mishnaic tractates deals exclusively with agadah. The class will focus primarily on literary and historical questions.</p> <p>Usually offered every fourth year.</p> <p>Mr. Kimelman</p>	<p>NEJS 131b. Biblical Poetry: Love and Death</p> <p>A close reading of Hebrew poetic texts of different types from different time periods and a consideration of what makes these texts "poetic." Texts will include selections from Song of Songs, Lamentations, Ecclesiastes and Job.</p> <p>Usually offered in odd years.</p> <p>Mr. Brettler</p>

NEJS 132b. The Literary Study of Midrash	An introduction to the ancient rabbinic Bible commentaries known as aggadic Midrash. The methods and assumptions of this literature will be explored and related to modern literary theory. Features of midrashic parables and legends will also be considered. Representative texts will be treated from different collections and periods. Text study will follow Hebrew texts with English translations provided.	NEJS 139a. Contemporary Israeli Literature: S.Y. Agnon — The Short Stories	The course will sample Agnon's writings in this genre, from the Hassidic tales to the symbolic and fantastic. A critical analysis of his narrative technique will serve as a key to his unique style and vision.
	Usually offered every year.		Usually offered in odd years.
	Mr. Fishbane		Ms. Ramras-Rauch
NEJS 134a. Muslim Cultures and IMES	See ANTH 134a for description.	NEJS 139b. Modern Hebrew Literature: Poetry	An introduction. Critical analysis of trends and aesthetic values of modern Hebrew poetry from the end of the 19th century until the second half of the 20th century. Study of selected works of Bialik, Tchernichovsky, Lamdan, U.Z. Grinberg, Alterman, Amichai, Gilboa.
	Usually offered in odd years.		Usually offered in odd years.
	Mr. Messick		Staff
NEJS 135a. Jewish and Islamic Philosophy: The Platonic Dimension	The influence of Plato's philosophy, with its strong affinity to mystical thought, was widespread in medieval Jewish and Islamic philosophy. This course will examine this dimension in the writings of Shelomo ibn Gabirol, Judah Halevi, Avicenna and other leading medieval thinkers.	NEJS 140a. The Jews in Europe to 1492	The history of the Jew in the European Diaspora to 1492: the Jews in the Roman Empire; the origins of antisemitism; the Jewish religious heritage; the medieval Jewish community; the medieval church, society, economy and the Jews; the expulsion of the Jews from Western Europe.
	Usually offered every third year.		Usually offered in even years.
	Staff		Mr. Ravid
NEJS 135b. Aristotelian Elements in Islamic and Jewish Philosophy	Medieval Aristotelianism is faithful to Aristotle, but in its fashion. That fashion is decisive in Islamic and medieval Jewish philosophy. It will be explored by first ascertaining Aristotle's views in the areas of physics, metaphysics and ethics; and then by tracing expressions of these ideas in English translations of writings of Alfarabi, Avicenna, Abraham ibn Daud and Maimonides.	NEJS 141b. Catholics, Protestants and Jews in Western Europe from the Reformation to the Present	A study of the political, legal, social and economic status of Catholics, Protestants and Jews in early and modern Europe, with emphasis on the status of minorities and their struggle for equality in the transition from the medieval republica Christiana to the modern secular nation-state.
	Usually offered every third year.		Usually offered in even years.
	Staff		Mr. Ravid
NEJS 137a. Three Major Themes in Modern Hebrew Literature	A survey of Hebrew literature of the last 100 years, covering major writers of fiction and poetry. Topics discussed will include biblical motifs, national redemption, encounter with the Land of Israel and others. Writers covered include Mendelev, Brenner, Agnon, Hazaz and others. Poets include Bialik, Tchernichovsky, Uri Zvi Greenberg, Shlonsky, Alterman and Leah Goldberg.	NEJS 142a. An Introduction to Post-Biblical Jewish History	An introduction to the main trends and developments in the legal, economic, social and religious history of the Jews, with emphasis on major areas of Jewish settlement.
	Usually offered every third year.		Usually offered in odd years.
	Ms. Ramras-Rauch		Mr. Ravid
NEJS 137b. Contemporary Israeli Literature: Fiction	Israeli fiction reflects many of the problems in contemporary Israeli life: the relation to the Arab, the effects of the Holocaust, the self-definition of the Jew, etc. Writers covered will be S. Yizhar, Moshe Shamir, Aharon Appelfeld, Binyamin Tammuz, Amos Oz, A.B. Yehoshua and others.	NEJS 143b. Hellenistic Philosophies	This course will examine major philosophical movements of the Greco-Roman world of late antiquity. The ideas of Epicureanism, Stoicism, Skepticism and Neoplatonism will be studied, with particular attention to the writings of Philo, Plotinus and the Church Fathers.
	Usually offered in even years.		Usually offered every fourth year.
	Ms. Ramras-Rauch		Staff

NEJS 144a. Jewish Communities in the Muslim Middle East	A historical survey of Jewish-Muslim attitudes, relations and interactions in the Muslim countries of the Middle East. Among the subjects to be discussed: the legal position of the Jews under Islam; Muslim actual policies and attitudes; Jewish-Muslim cultural interaction; Jewish social organization in Muslim lands.	NEJS 147b. The Arab-Israeli Conflict	Consideration of Arab-Jewish relations, attitudes and interactions from 1880 to the present. Traces the involvement of the struggle for Palestine into a major regional conflict. Emphasis is on social factors and intellectual currents and their impact on politics. Examines the conflict within its international setting.
	Usually offered every fourth year.		Usually offered in even years.
	Mr. Levy		Mr. Levy
NEJS 144b. Nationalism in the Middle East	A historical and comparative analysis of Arab, Turkish and Persian nationalism in the 20th century. Origins, ideological currents and attitudes toward national, regional and global issues are among the topics to be discussed.	NEJS 149b. Islamic Bibliography	The purpose of this course is to familiarize the student with the history of oral and written communications in Islam and the Middle East. Origins and development of printing are discussed. Special emphasis is placed on bibliographic literature in western languages of Arabic, Turkish and Persian manuscripts and printed works. There are no prerequisites, although a workable knowledge of European languages and languages of the area is desirable.
	Usually offered in even years.		Usually offered every fourth year.
	Mr. Levy		Staff
NEJS 145a. State and Society in the Middle East	The sharp polarities that lie at the heart of Middle-Eastern politics are seen in the clashes between authoritarianism vs. democracy, westernization vs. tradition, women's rights vs. male dominance, religious fanaticism vs. tolerance. This course will examine how governments from Morocco to Iran have pursued economic development in environments of scarcity and conflict. Multi-disciplinary readings of a current nature will emphasize the "insider's" point of view.	NEJS 150b. The Great Powers and the Middle East, 1798 to Present	The course examines the dynamics of Great Power involvement in the Middle East since Napoleon's landing in Egypt in 1798.
	Usually offered every year.		Usually offered in odd years.
	Staff		Mr. Wasserstein
NEJS 145b. The Making of the Modern Middle East	This course will discuss the processes that led to the emergence of the modern Middle East: disintegration of Islamic society in the 19th century; European colonialism; reform and reaction; the rise of nationalism and the emergence of the modern states.	NEJS 151a. Autobiographies, Memoirs and Letters in Jewish History	This course will examine major periods, themes and personalities in Jewish history through the reading of autobiographies, memoirs and letters. The emphasis will be on historical insights with attention also to the literary and psychological dimensions, and students are encouraged to contribute from their own perspectives and interests.
	Usually offered every fourth year.		Usually offered in even years.
	Mr. Levy		Mr. Ravid
NEJS 146b. Judaism, Christianity and Islam	A comparison of three kindred religions, from antiquity to current times. The tenets of these faiths, their doctrines and rituals will be examined in the perspective of their historic and on-going relationship. Contemporary religious issues affecting all three traditions will be discussed.	NEJS 151b. History of the Jews of Venice	An examination of some key problems in Jewish history in the light of the experience of the Jews of Venice in the context of the general social, political and economic history of that city. Topics include: the attitude of the church and state toward the Jews, the institution of the ghetto, Jewish merchants and money lenders, the Marranos and the inquisition, <i>raison d'état</i> and the admission of the Jews to Western Europe and North America.
	Usually offered every fourth year.		Attention will also be paid to techniques of archival research.
	Staff		Usually offered in odd years.
NEJS 147a. History of the Middle East and the Ottoman Empire, 1450-1914	A historical survey of the Middle East from the establishment of the Ottoman Empire as the area's predominant power to World War I. Topics include Ottoman institutions, their transformation and impact on Middle Eastern society, the Ottoman Empire as a world power, decline and European imperialism; 19th-century reform and westernization.		Mr. Ravid
	Usually offered in even years.		
	Mr. Levy		

<p>NEJS 152b. A History of Antisemitism</p>	<p>A historical survey of the phenomena of antisemitism from classical antiquity to the present. The historical background will be presented in lectures, while the readings, devoted exclusively to the topic of antisemitism, will serve as the basis for discussion sessions.</p> <p>Usually offered every third year.</p> <p>Mr. Ravid</p>	<p>NEJS 161a. American Jewish Life</p> <p>A survey of contemporary American Jewish life with special emphasis on the diverse forms of Jewish identification found in American Jewry. Topics include Reform, Conservative, and Orthodox Judaism; Jewish family life including intermarriage; and the relationship of Jews to the general society and to other ethnic groups.</p> <p>Usually offered every year.</p> <p>Mr. Sklare</p>
<p>NEJS 154b. Introduction to Modern Arabic Political Literature</p>	<p>A survey of representative Arabic political literature in the 20th century. This course is intended to prepare students to read and understand modern Arabic political writing against the background of contemporary historical events and intellectual currents. Among the authors studied will be Qustantin Zuraig, Sati al-Husri, Camal Abdel-Nasser, Michel Aflaq.</p> <p>Usually offered every fourth year.</p> <p>Staff</p>	<p>NEJS 162b. The Rise of Modern Yiddish Culture</p> <p>This course will examine the process by which Yiddish, the spoken language of East European Jews, became the vehicle for a sophisticated modern culture, encompassing poetry, prose, literary and social criticism, theater, journalism, education and scholarship. Following an overview and analysis of Yiddish culture in Russia and Poland, we will consider the challenges that it faced in three radically new settings — the USSR, Palestine and America.</p> <p>All readings will be in English.</p> <p>Usually offered in even years.</p> <p>Staff</p>
<p>NEJS 156b. Man and the Gods: Mythology and Magic of the Ancient Near East</p>	<p>An introduction to the Myth and Magic of the Ancient Near East. Special attention will be paid to how the myths express an understanding of the Gods and the world, and how magic deals with anxieties of human existence.</p> <p>Usually offered in odd years.</p> <p>Mr. Abusch</p>	<p>NEJS 164b. The Sociology of the American Jewish Community</p> <p>The role of the subcommunity in American society; Jewish communal services in medieval and modern times; contemporary American Jewish communal forms; religion, community relations, overseas aid, social welfare and relationship with Israel.</p> <p>Usually offered every year.</p> <p>Mr. Sklare</p>
<p>NEJS 157a. A History of Israel, 1948-Present</p>	<p>An analysis of Israel's domestic and foreign policies from 1948 to the present. Particular attention will be given to social and political trends in Israeli society, issues of war and peace, relations with Arabs and Palestinians and relations with the United States.</p> <p>Usually offered every fourth year.</p> <p>Mr. Reinharz</p>	<p>NEJS 166a. Modern Jewish History to 1880</p> <p>Major themes will include: Enlightenment and Haskalah in Eastern and Western Europe, Hasidism, Emancipation and the argument for and against Emancipation, assimilation and the problem of the marginal Jew, the Science of Judaism, the development of denominationalism in Judaism.</p> <p>Usually offered every fourth year.</p> <p>Mr. Reinharz</p>
<p>NEJS 158b. Biblical Prophecy: Book of Jeremiah</p>	<p>A study of the Hebrew text of the book of Jeremiah with emphasis on the role of prophecy and the literary forms and theological issues with which the prophet deals.</p> <p>Usually offered every fourth year.</p> <p>Mr. Fishbane</p>	<p>NEJS 166b. Modern Jewish History 1880-1948</p> <p>Major themes will include: integration and assimilation, migration, nationalism, Zionism, non-Zionism, anti-Zionism, Diaspora nationalism, Western and Eastern Jewry in the period between the World Wars, the Holocaust and the establishment of the State of Israel.</p> <p>Usually offered every fourth year.</p> <p>Mr. Reinharz</p>
<p>NEJS 160a. The Emergence of the American Jewish Pattern, 1654-1967</p>	<p>Survey of American Jewish history from the earliest settlement to the present. The emergence of the institutions, ideologies, life styles and cultural norms that constitute the American Jewish pattern.</p> <p>Usually offered every year.</p> <p>Mr. Jick</p>	

NEJS 168a. East European Jewry: The World of Tradition	<p>For centuries, Eastern Europe was one of the world's most vibrant centers of Jewish life. In this course we will plot the growth and development of East European Jewry from its infancy until the beginning of modern times. Particular attention will be paid to the social and cultural features that distinguish this Jewry from others — the Yiddish language, the shtetl and Hasidism. We will also examine the process by which Western ideas of enlightenment began to make inroads into Eastern Europe and challenged traditional values and institutions.</p> <p>Usually offered every year.</p> <p>Mr. Steinlauf</p>	<p>NEJS 175a. History of Zionism</p> <p>The rise and development of the Zionist idea, Zionist parties, Zionist politics and Zionist diplomacy in relation to Jewish history and international affairs from 1880 to 1950. Zionism today.</p> <p>Usually offered every fourth year.</p> <p>Mr. Reinharz</p>
NEJS 168b. History of the Jews in the Soviet Union	<p>Topics will include: Lenin and the "Jewish question," the Jewish sections of the Communist party, the rise and fall of Soviet Yiddish culture, the Holocaust in the Ukraine and White Russia, antisemitic policies and propaganda in the postwar period, the emigration of the 1970s.</p> <p>Usually offered in even years.</p> <p>Mr. Steinlauf</p>	<p>NEJS 177a. Agnon and His Contemporaries: Hebrew Literature in Translation</p> <p>The course will examine the existence and struggle of the Jews in the Diaspora and Israel from World War I to the present, as reflected in modern Hebrew literature, particularly in the works of Agnon and his contemporaries. Special emphasis will also be given to parallel motifs in modern European literature.</p> <p>Usually offered every third year.</p> <p>Staff</p>
NEJS 169a. The Destruction of European Jewry	<p>The function of antisemitism in the comparative history and politics of Nazism; the Holocaust organization and the victims' responses; allied policies and Western reactions; postwar punishment and reparations. Interdisciplinary approaches to historical sociology and legal philosophy will be applied.</p> <p>Usually offered every year.</p> <p>Mr. Jick</p>	<p>NEJS 182a. Introduction to Jewish Bibliography</p> <p>The aim of the course is to acquaint students in the various fields of Judaic studies with the general bibliographic tools and the bibliographies in the major subfields. This course will concentrate on general Judaica/Hebraica bibliographies and on subject bibliographies in such fields as Jewish history, Jewish philosophy, Hebrew language and literature, antisemitism, Holocaust studies, etc.</p> <p>Usually offered every semester.</p> <p>Mr. Cutter</p>
NEJS 170b. East European Jewry: In Modern Times	<p>This course will focus on the great challenges and changes that were experienced by East European Jewry in modern times. These include: antisemitism in its Tsarist, Soviet and Polish forms; the Jewish Enlightenment and the emergence of a secular Jewish culture in Yiddish and Hebrew; the rise of modern political currents — Zionism, Diaspora and Nationalism, and Socialism; and the liquidation of Jewish institutions in the Soviet Union.</p> <p>Usually offered every year.</p> <p>Staff</p>	<p>NEJS 184a. Arabs and Jews in Palestine 1856-1948</p> <p>See HIST 184a for description.</p> <p>Usually offered every third year.</p> <p>Mr. Wasserstein</p>
NEJS 171b. Trends and Values in Yiddish Literature	<p>A study (in English) of the major lines of development in the classical period of Yiddish literature: the works of Sholem Aleichem, Mendele and I.L. Peretz.</p> <p>Usually offered in odd years.</p> <p>Staff</p>	<p>NEJS 201a. Genesis: A Study in Method</p> <p>An examination of the Hebrew text of Genesis in relation to the methodologies of modern biblical scholarship. Particular attention to source criticism, form criticism and the text in its ancient environment.</p> <p>Usually offered every third year.</p> <p>Mr. Brettler</p>
		<p>NEJS 202a. Seminar in Biblical Religion: Anthropomorphism</p> <p>An advanced seminar dealing with selected themes and topics in biblical religion, with comparative reference to other ancient Near Eastern religions.</p> <p>Usually offered in even years.</p> <p>Mr. Fishbane</p>
		<p>NEJS 202b. Introduction to Sumerian: Historical Inscriptions</p> <p>Usually offered every third year.</p> <p>Mr. Abusch</p>

NEJS 203a. Biblical Historiography	An examination of representative types of historical writings in the Bible and their relationship to ancient events and to political and religious ideologies. The problems of writing modern histories of ancient Israel will also be explored. Usually offered every third year. Mr. Brettler	NEJS 210a. Seminar on the Institutional Development of the American Jewish Community	Usually offered in even years. Mr. Jick
NEJS 203b. Bible and Ancient Near East Studies	Ongoing seminar examining the major works in modern biblical and ancient Near East studies, with special focus on methodology and trends of research. Usually offered every year. Mr. Brettler	NEJS 210b. Jewish Communal Service; Historical and Philosophical Contexts	An examination of changing ideological and philosophical positions relating to the development of the American Jewish community and the profession of Jewish communal service. Usually offered in even years. Mr. Jick
NEJS 204a. History of Biblical Hebrew: Continuity and Change	Problems in the historical study of Biblical Hebrew. The development of the language will be described against its North-West Semitic setting. In this framework lexical and grammatical characteristics of early Biblical Hebrew will be studied and selected extra-biblical sources will be examined (Arma Letters, Ugaritic literature, Canaanite and Hebrew inscriptions, the Dead Sea Scrolls). Usually offered in even years. Staff	NEJS 211a. The Book of Hosea	A close reading of Hosea. Various approaches to the text will be compared, especially as they relate to the grammatical, textual and source-critical problems of this book. Usually offered every third year. Mr. Brettler
NEJS 204b. Biblical Textual Criticism	Usually offered in even years. Staff	NEJS 211b. Medieval Jewish Biblical Exegesis	An introduction to traditional Hebrew Bible commentaries. The emphasis will be on building competence in reading these texts in their original Hebrew. The exegetical assumptions of various commentators and their use for modern Bible exegesis will also be explored. Usually offered every third year. Mr. Brettler
NEJS 206a. Advanced Akkadian: Literary Texts	Usually offered every third year. Mr. Geller	NEJS 212b. Psalms	An examination of selected chapters from the Hebrew text of the book of Psalms. Issues covered will include: poetic structure of psalms, meter, psalms in their Near Eastern context, form-criticism of psalms and the place of psalms in the Israelite cult. Usually offered every third year. Mr. Brettler
NEJS 206b. Advanced Akkadian: Literary Texts	Usually offered every third year. Mr. Geller	NEJS 215b. Topics in American Jewish Communal Organization	Usually offered every third year. Mr. Sklare
NEJS 207a. Advanced Akkadian: Religious Texts	Usually offered every third year. Mr. Abusch	NEJS 225b. Northwest Semitic Inscriptions I	A careful reading of Hebrew, Edomite and Moabite inscriptions from the First Temple period. Issues of epigraphy, historical grammar, dialectology and historical reconstruction will be examined. Usually offered every three years. Mr. Geller
NEJS 207b. Advanced Akkadian: Religious Texts	Usually offered every third year. Mr. Abusch	NEJS 230a. Seminar in Medieval Jewish Philosophy	Maimonides and contemporary criticism. Usually offered in even years. Mr. Fox
NEJS 209a. Advanced Seminar in Biblical and Ancient Near Eastern Poetics	Usually offered in even years. Staff		
NEJS 209b. Advanced Sumerian: Literary and Religious Texts	Usually offered every third year. Mr. Abusch		

NEJS 230b. Seminar in Medieval Jewish Philosophy	Usually offered in even years. Mr. Fox	NEJS 264a. Seminar: Rabbinic Theology	A study of the various methodologies used to study the thought of the rabbis of the Talmud and Midrash. The seminar will focus on the methods used by scholars up to and including Ephraim Urbach and then will turn to those methods that call for alternative ways of ascertaining rabbinic thought. Usually offered every fourth year. Mr. Kimelman
NEJS 232b. Seminar in Modern Jewish Philosophy	Usually offered in even years. Mr. Fox		
NEJS 234b. Seminar in Late Medieval Jewish Philosophy	Usually offered every third year. Staff		
NEJS 240a. As of Sufferance and Not on Right	In the premodern Diaspora, the Jews generally lived as a corporate group whose status was regulated by special charters and laws. This course will examine some such representative documents and attempt to determine how they reflect the conditions of their times. Usually offered in odd years. Mr. Ravid	NEJS 287b. Methods in Jewish Community Research	See JCS 287b. Usually offered every year. Mr. Tobin
		NEJS 317-340. Reading Courses	Special tutorials for advanced graduate students.
NEJS 252b. Hasidism and Its Opponents	The rise of Hasidism and the ensuing religious conflict between Hasidism and Mitnagdim. The focus will be on the interplay between theological, philosophic and halakhic points of contention and social, political and historical factors. Reading knowledge of Hebrew required. Usually offered in even years. Staff	317a and b. Readings in Assyriology	Mr. Abusch
		318a and b. Readings in Medieval Jewish Philosophy	Staff
		319a and b. Readings in Judaeo-Arabic Literature	Staff
		320a and b. Readings in Islamic Philosophy	Staff
NEJS 258b. Seminar on Modern Jewish History and Historiography	Usually offered in even years. Mr. Reinhartz	321a and b. Readings in Medieval Jewish Philosophy	Mr. Fox
NEJS 259b. Topics on Zionism	Usually offered every third year. Mr. Reinhartz	322a and b. Readings in Modern Jewish Philosophy	Mr. Fox
NEJS 260a. Seminar on the Philosophical Foundations of Jewish Ethics: Ancient and Medieval	Usually offered every fourth year. Mr. Fox	323a and b. Readings in Jewish Thought	Mr. Fox
		324a and b. Readings in Hebrew	Ms. Nevo-Hacohen
		326a and b. Readings in Biblical Literature	Mr. Fishbane
NEJS 260b. Seminar on the Philosophical Foundations of Jewish Ethics: Modern	Usually offered every fourth year. Mr. Fox	327a and b. Readings in Biblical Literature	Mr. Brettler

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328a and b. Readings in Ancient Near Eastern Languages	Mr. Abusch	337a and b. Readings in Talmudic and Midrashic Literature	Mr. Kimelman
330a and b. Readings in the Sociology of the Jewish Community	Mr. Sklare	339a and b. Readings in Ottoman History and Civilization	Mr. Levy
331a and b. Readings in Yiddish Literature	Staff	340a and b. Readings in Modern Middle Eastern History	Mr. Levy
332a and b. Readings in American Jewish History	Mr. Jick	NEJS 401d-411d. Dissertation Colloquium	
333a and b. Readings in the History of the Jews in Europe to 1800	Mr. Ravid	Independent research for the Ph.D. degree.	
334a and b. Readings in Modern Jewish History	Mr. Reinharz	401d. Mr. Abusch	408d. Mr. Jick
335a and b. Readings in East European Jewish History	Mr. Steinlauf	402d. Mr. Fox	409d. Mr. Fishbane
		404d. Mr. Reinharz	410d. Mr. Ravid
		406d. Mr. Sklare	411d. Mr. Levy

The Hornstein Program in Jewish Communal Service

Objectives

The two-year program in Jewish communal service or Jewish education leading to the Master of Arts degree, integrates Jewish studies and professional training, preparing students for positions in a variety of settings in the Jewish community, including federations, community centers, Hillel foundations, schools and other communal organizations.

A special one-year master's program is offered for students with graduate degrees in social work, Jewish studies or a related field. In addition, part-time study is permitted, but students must complete the program in no more than four years.

Starting with the academic year 1989-90 two new concentrations are being added to the Hornstein Program: 1) fund-raising and philanthropy, 2) the Nathan Perlmutter Institute for Jewish Advocacy.

Admission

The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to the Hornstein Program in Jewish Communal Service. In addition, applicants are expected to submit results of either the Graduate Record Examination or the Miller Analogies Test, a statement that describes the applicant's Jewish training and background and future vocational plans, and a sample of written material. Applicants are expected to arrange for a personal interview.

Faculty

Professor
Bernard Reisman,
Director: American
Jewish communal
studies.

Adjunct Professor
Earl Raab:
Jewish advocacy.

Assistant Professor
Joseph Reimer:
Contemporary
Judaism. Jewish
identity.

Adjunct Assistant
Professor
**Lawrence
Sternberg:**
Jewish advocacy and
community relations.

Lecturer with rank of
Assistant Professor
Gerald Showstack:
American Jewish
community. Israeli
society.

Lecturer with rank of
Assistant Professor
Lois C. Swack:
Field work. Jewish
communal service.

Lecturer
Joshua Elkin:
Jewish education.

Lecturer
**Helen Jeffrey
Kadish:**
Philanthropy and
fund-raising.

Lecturer
Daniel Margolis:
Jewish education.

Lecturer
Susan Shevitz:
Jewish education.

Adjunct Lecturer
**Sylvia Barack
Fishman:**
Changing Jewish
families. Women's
roles.

See the Department of
Near Eastern and
Judaic Studies and the
Heller School catalog
for other faculty and
course offerings.

Degree Requirements

Master of Arts

Students in the Hornstein program may concentrate in either: 1. Jewish communal service (with specializations in group work and community organization or management) or 2. Jewish education (formal or informal).

Program of Study.

Academic Studies.

Students are expected to complete a minimum of 14 courses, including study in the following areas: professional studies, contemporary Jewish studies and classical Jewish studies. Students may take courses at other Boston area graduate schools (Boston University and Boston College).

Cocurricular Courses.

Seminar on Contemporary Jewish Issues.
During the fall term this seminar meets every Friday with guest speakers having a particular point of view on a range of subjects on the Jewish agenda today.

Tisch Seminars.
Each term both first and second year students participate in an intensive institute focusing on an area of professional skill.

Betty Starr Colloquium.

For first year students. During intersession three days are devoted to visiting the national offices in New York City of major Jewish organizations.

Kohl Practicum in Educational Materials and Learning Environments.

For second year Jewish education concentrators. Four days will be spent in Chicago during intersession at the Kohl Teacher Center. Students will gain experience in designing educational materials and learning environments.

Milender Seminar in Jewish Communal Leadership.

Each year both first and second year students participate in a three day seminar on Jewish communal leadership with an outstanding leader of the Jewish communal world.

Fieldwork/Internship.	Summer Study in Israel. Joseph and Esther Foster Seminar in Israel on contemporary Jewish life is sponsored in cooperation with the Center for Jewish Education in the Diaspora of Hebrew University and is required of all students at the completion of their first year of study. The four week program, held during May and June, is a combination of classes and field visits designed to provide an in-depth analysis of Israel. Costs for the Israel seminar are partially subsidized by scholarships provided by the Joseph and Esther Foster Fund and the Jewish Agency. Students are expected to pay the remainder of the cost.	Substantive Paper.	Students are required, during the second year, to submit a major substantive paper growing out of some phase of their fieldwork experience. The paper should analyze a practical issue in Jewish communal service in light of both the student's own experience and the relevant literature.
		Residence Requirement.	The residence requirement for this program is two years of full-time study or the equivalent thereof in part-time study.
		Language Requirement.	Fluency in Hebrew is required at a level comparable to two years of college training. Students not meeting this requirement upon entrance are required to enroll in courses in Hebrew language — not for credit .
	Students have two fieldwork experiences in a Boston area-Jewish educational or communal service organization. In the first year, fieldwork is 15 hours a week; in the second year, 20 hours. This schedule requires students to be in residence through the end of May and to plan for a shorter winter intersession than indicated in the University's Academic Calendar.		

Courses of Instruction

JCS 53b. Introduction to Talmud	See NEJS 53b. Usually offered every year. Mr. Kimelman	JCS 121a. Jewish Education in America	This introductory course examines how the Jewish community is organized to provide voluntary education in an open society. Types of Jewish schooling, organizational structures, functions of Jewish education and its communal dimensions will be explored with special attention given to the emergence of new educational settings, demographic shifts, outreach to different populations and the effects of trends in American society. Usually offered in even years. Staff
JCS 117b. Modern Jewish American Writers	Authors such as I.B. Singer, Abraham Cahan, Henry Roth, Saul Bellow, Bernard Malamud, Philip Roth, Cynthia Ozick, Tillie Olsen and Elie Weisel present a panorama of Jewish life from immigration through contemporary times. We will explore topics such as tensions between Jewish tradition and secular America and transformations in individual and family values as expressed through contemporary fiction. The course will be based on the reading and discussion of novels and shorter selections by the writers mentioned. Usually offered in odd years. Ms. Fishman	JCS 122a. Jewish Educational Curriculum	This course follows a progression from learning to teaching to creating and implementing curriculum. The main issues are how we learn and help others to learn about Jewish culture and traditions in schools, informal and work settings. Usually offered in even years. Mr. Reimer
JCS 119a. Philosophy of Jewish Education	An examination of two questions: (1) what modern classics in philosophy of education teach us about the pursuit of Jewish education and (2) what contemporary Jewish philosophers suggest ought to be the shape and direction of teaching Judaism in today's world? Usually offered in odd years. Mr. Reimer	JCS 124a. Great Ages and Ideas of the Jewish People	See NEJS 1a. Usually offered every year. Mr. Kimelman
JCS 120b. Intermediate Talmud	See NEJS 120b. Usually offered every year. Mr. Kimelman	JCS 132b. The Literary Study of Midrash	See NEJS 132b. Usually offered every year. Mr. Fishbane

JCS 142a. An Introduction to Post-Biblical Jewish History	See NEJS 142a. Usually offered in odd years. Mr. Ravid	JCS 203b. Jewish Family Education	A course designed to promote thinking about serving families; how schools and agencies can move beyond serving individuals alone to encompass the family as a cross-generational unit. The course will include an introduction to the psychology of family life, a survey of recent trends in American Jewish family life and a consideration of programs in family education. Usually offered in odd years. Mr. Reimer
JCS 143b. Educational Leadership: Administration and Supervision	Patterns of educational organization, staff development and supervision and school management will be examined in light of recent qualitative and quantitative research about educational leadership. The implications for Jewish education will be analyzed. Usually offered every year. Messrs. Margolis and Elkin	JCS 205a. Introduction to Jewish Communal Service	History of Jewish communal services in America, the organizational settings in which Jewish services are offered, the factors making for effective group and organizational performance and essence of professionalism. Usually offered every year. Mr. Reisman
JCS 157a. History of Israel, 1948-Present	See NEJS 157a. Usually offered in even years. Mr. Reinharz	JCS 205b. Theory and Skills of Jewish Communal Service	A systematic approach to professional leadership in Jewish communal organizations; analysis of contemporary societal developments that affect Jewish individuals and families; new programs and policies to meet changing needs. Usually offered in even years. Mr. Reisman
JCS 161a. American Jewish Life	See NEJS 161a. Usually offered every year. Mr. Sklare	JCS 206b. Informal Education and Small Groups	This course has two components: (1) principles of informal, experiential education for Jewish communal work and (2) small group dynamics — leadership, group process, individual dynamics and self-awareness of the participants as it relates to group leadership roles in Jewish communal life. Usually offered in even years. Mr. Reisman
JCS 164b. The Sociology of the American Jew	See NEJS 164b. Usually offered every year. Mr. Sklare	JCS 210a. Seminar on Institutional Development of the American Jewish Community	See NEJS 210a. Usually offered every year. Mr. Jick
JCS 166a. Modern Jewish History to 1880	See NEJS 166a. Usually offered every fourth year. Mr. Reinharz	JCS 210b. Jewish Communal Service: Historical and Philosophical Antecedents	An examination of changing ideological and philosophical positions relating to the development of the American Jewish community and the profession of Jewish service. Usually offered every year. Mr. Jick
JCS 166b. Modern Jewish History 1880-1948	See NEJS 166b. Usually offered every fourth year. Mr. Reinharz		
JCS 168a. East European Jewry to 1815	See NEJS 168a. Usually offered every year. Mr. Fishman		
JCS 202b. Jewish Life Cycle	Bringing to bear the insights of developmental psychology on the life cycle of American Jews, the course will deal with childhood, adolescence and adulthood. Course topics will include: celebrating the birth of a child, Bar Mitzvah and adolescence, marriage, divorce and stages of adulthood and development of faith in adults. Practical applications to be considered. Usually offered in odd years. Mr. Reimer		

JCS 211a. Jewish Adaptation to American Life	<p>This course will focus on the adaptation of Jews and the Jewish community to the modern, open setting of American society. After a brief look at the reflection of that process in fiction, the parameters of traditional Jewish communal life, the dynamics of modernization and the characteristics of American society will be outlined as the context within which to understand the central theme of adaptation. This theme will then be examined as it finds expression in several key areas of Jewish life in America.</p> <p>Usually offered in odd years.</p> <p>Mr. Showstack</p>	JCS 235a. Seminar: The Culture of Jewish Educational Settings	<p>This seminar will examine unique aspects of Jewish educational settings. It will help participants develop an understanding of the culture of the setting in which their fieldwork takes place and will explore the ramifications of the different organizational cultures on the ongoing work of the Jewish educator. Issues such as roles, expectations, ideology, values and theories will be raised.</p> <p>Usually offered in even years.</p> <p>Ms. Shevitz</p>
JCS 213b. Jewish Traditions in Communal Service	<p>An examination of the role that traditional Jewish values and practices can play in shaping the perspectives of Jewish communal professionals. Emphasis will be on increasing familiarity with Jewish concepts and practices and knowing how they may be used to enhance the meaning of one's work.</p> <p>Usually offered in even years.</p> <p>Mr. Reimer</p>	JCS 235b. Issues in Jewish Educational Practice	<p>This biweekly seminar will examine issues confronting Jewish educators in their work. Topics to be explored will emerge from students' interests and fieldwork experiences. Theoretical and practical considerations will be brought to bear on each topic. The relationship between theory and practice and how these relate to educational goals and agendas will be considered.</p> <p>Usually offered in even years.</p> <p>Ms. Shevitz</p>
JCS 217b. Ethnicity and Religion in Israel	<p>This course focuses on two persistent and critical issues basic to an understanding of Israeli society: ethnicity and religion. Additional topics, such as politics, that have a direct bearing on issues of religion and ethnicity in Israel are also treated, and the implications of these matters for Israel-diaspora relations is examined.</p> <p>Usually offered every year.</p> <p>Mr. Showstack</p>	JCS 236c. Practicum: Teaching in a Jewish Setting	<p>This practicum applies to learning theory, pedagogic principles and research about effective teaching and schools to the challenges of working in Jewish educational settings. Through readings, structured observations of teachers, visits to different classes and a micro-teaching laboratory, students gain awareness of the art and science of teaching while developing their own teaching abilities.</p> <p>Usually offered in odd years.</p> <p>Ms. Shevitz</p>
JCS 220b. Jewish Community Relations	<p>An introduction to the field of Jewish community relations in the United States including: a view of the development of modern Jewish defense organizations; an analysis of American Jewish community relations organizations and their constituencies; an examination of issues addressed and methods used by community relations agencies; and an introduction to professional methods in community organization.</p> <p>Usually offered in odd years.</p> <p>Mr. Sternberg</p>	JCS 237b. Organizations: Theory and Behavior	<p>Organizations, even when carefully designed to be effective and/or benign environments, have characteristics that sometimes confound and frustrate the most dedicated personnel. This course examines major theories of organization with special attention to the implications they hold for understanding, diagnosing and managing what goes on. By applying different analytic frameworks to real and simulated organizational dilemmas, students will gain perspectives and skills to help them productively handle the inevitable tensions of life in communal institutions.</p> <p>Usually offered in odd years.</p> <p>Ms. Shevitz</p>
JCS 229a. Jewish Life: Organization and Agenda	<p>This course will examine how the Jewish community organizes itself. Primary focus will be on the American Jewish community, with some additional attention to international and Israeli organizations. The agenda of the organized Jewish community will be addressed, especially in terms of the impact of recent societal and institutional developments on the meeting of communal needs.</p> <p>Usually offered in odd years.</p> <p>Mr. Showstack</p>	JCS 240a. Jewish Advocacy: History, Issues and Trends	<p>An examination of the Jewish community relations organizations in North America, their early development, changing agendas and styles of operation. The major focus is on the current issues facing the American Jewish community and the strategies to address them.</p> <p>Usually offered in odd years.</p> <p>Mr. Raab</p>

**JCS 241b.
Fund-raising Skills
and Techniques**

Technologies for organizing and carrying out fund-raising campaigns for Jewish communal organizations.

Usually offered in odd years.

Ms. Kadish

**JCS 248d.
Methods in Jewish
Communal Service**

Students are placed in selected Jewish communal organizations during the first year for two days a week of field practice. They receive individual supervision from an agency field supervisor. The seminar meets weekly and focuses on work with groups, professional development and Jewish community resources and services.

Usually offered every year.

Ms. Swack

**JCS 250d.
Professional
Integrative Seminar**

The seminar seeks to develop a common theoretical base for Jewish communal professionals who will be working in Jewish educational and communal settings. The theory will be applied to a series of practical professional tasks with the objective of enriching professional skills. The seminar meets weekly in the fall term and biweekly in the spring term.

Usually offered every year.

Mr. Reisman, Ms. Shevitz, Ms. Swack

**JCS 287a.
Methods in Jewish
Community
Research**

This seminar will acquaint both researchers and pre-professionals in Jewish communal service with basic research techniques via "hands-on" experience conducting research for the Cohen Center for Modern Jewish Studies projects, or by developing other projects based on scholarly interest/field placements. The course includes readings on methods and planning applications in Jewish communal agencies.

Usually offered in even years.

Mr. Tobin

**JCS-SS 350.
Foster Seminar in
Israel on
Contemporary
Jewish Issues**

Offered every year from mid-May through mid-June in Israel in cooperation with the Center for Jewish Education in the Diaspora at The Hebrew University.

Physics

Objectives

The graduate program in physics is designed to equip students with a broad understanding of major fields of physics and to train them to carry out independent, original research. This objective is to be attained by formal course work and supervised research projects. As the number of students who are accepted is limited, a close contact between students and faculty is maintained, permitting close supervision and guidance of each student.

Advanced degrees will be granted upon evidence of the student's knowledge, understanding and proficiency in classical and modern physics. The satisfactory completion of advanced courses will constitute partial fulfillment of these requirements. Research upon which theses may be based, with residence at Brandeis, may be carried out in the following areas.

Theoretical Physics:

Quantum theory of fields; elementary particle physics; relativity; super gravity; string theory; quantum statistical mechanics; quantum theory of the solid state, critical phenomena and phase transitions.

Experimental Physics:

High energy experimental physics; atomic and molecular physics; solid-state physics; surface physics; liquid-crystal physics; light scattering; positron physics; radio astronomy; biophysical structure analysis; biophysical magnetic resonance.

Admission

As a rule, only candidates for the Ph.D. degree will be accepted. The general requirements for admission to the Graduate School apply to candidates for admission to the graduate area in physics. Admission to advanced courses in physics will be granted following a conference with the student at entrance.

Faculty

Professor
Lawrence E. Kirsch,
Chair:
High energy
experimental physics.

Professor
Laurence F. Abbott:
Elementary particle
theory. Quantum
theory of fields.
Neural networks.

Professor
James R. Bensinger:
Experimental high
energy physics.

Professor
Stephan Berko:
Experimental solid-
state physics. Positron
interactions in solids.
Positronium physics.

Professor
Karl F. Canter:
Experimental low-
energy positron
physics at surfaces
and disordered
systems.

Professor
Donald L.D. Caspar
(Rosenstiel Basic
Medical Sciences
Research Center):
Structural molecular
biology. X-ray
crystallography.

Professor
Stanley A. Deser:
Quantum theory of
fields. Elementary
particles. Gravitation.
Supergravity. Strings.

Professor
Jack S. Goldstein:
Astrophysics. Science
and public policy.

Professor
Marcus T. Grisaru:
Quantum field theory.
Strings. Elementary
particles.
Supergravity.

Professor
Eugene P. Cross:
Quantum theory of
multiparticle systems.
Quantum theory of
solids. Kinetic theory.
Plasma physics.

Professor
Peter Heller:
Statistical physics.
Spin systems.

Professor
Robert B. Meyer:
Liquid crystals.
Colloids. Polymers.

Professor
Hugh N. Pendleton:
Mathematical physics.

Professor
Alfred C. Redfield
(Rosenstiel Basic
Medical Sciences
Research Center):
Magnetic resonance.
Biophysics.

Professor
Howard J. Schnitzer:
Elementary particle
theory. Quantum
theory of fields. String
theory.

Professor
Silvan S. Schweber:
History and
philosophy of science.
Quantum theory of
measurements.

Professor
John F.C. Wardle:
Radio astronomy.
Cosmology.

Associate Professor
Craig A. Blocker:
Experimental high-
energy physics.

Associate Professor
Robert V. Lange:
Educational software.

Associate Professor
David H. Roberts:
Theoretical
astrophysics. Radio
astronomy.

Associate Professor
**Hermann F.
Wellenstein:**
Experimental atomic
physics. Electronic
impact spectroscopy.

Assistant Professor
Bulbul Chakraborty:
Condensed matter
theory. Electronic
structure of solids and
disordered systems.

Assistant Professor
Seth Fraden:
Physics of liquid
crystals and
macromolecules.

Assistant Professor
Eric S. Jensen:
Experimental solid-
state physics.

Degree Requirements

Master of Arts

Program of Study.

The requirements for advanced degrees in the Department of Physics are as follows:

1. One year in residence as a full-time student.
2. Six term courses of advanced work in physics. A thesis on an approved topic may be accepted in place of a term course.
3. Satisfactory performance in the Qualifying Examination.

Course Requirements.

At least two graduate courses in the list below must be taken during the first three terms: (1) Statistical Physics, (2) Solid-State Physics, (3) Biophysics, (4) Elementary Particles, (5) Astrophysics, (6) Experimental Physics (Physics 109), (7) General Relativity. Note, however, that not all of the above courses will necessarily be given each year. One term of Advanced Quantum Mechanics (Physics 202a) will be a required course for all students.

Advanced Examinations.

Advanced examinations will be in topics partitioned in the several areas of research interests of the faculty. Faculty members working in each general area will function as a committee for this purpose and will provide information about their work through informal discussions and seminars. The advanced examination requirement consists of a written paper and an oral examination. While no original research by the student is expected, it is hoped that a proposal for a possible thesis topic will emerge. It is generally expected that the candidate will take the advanced examination in the field he/she wishes to pursue for the Ph.D. thesis, although there may be exceptions.

Doctor of Philosophy

1. Two years in residence as a full-time student.
2. Nine term courses of advanced work in physics.
3. Outstanding performance on the Qualifying Examination.
4. Passing of an advanced examination in topics related to the student's thesis subject. This examination will normally be taken after preparatory studies in the prospective field of research.
5. Doctoral thesis and final oral examination.

Thesis Research.

After passing the advanced examination, the student begins work with an advisor who guides his/her research program. The advisor should be a member of the Brandeis faculty but in special circumstances may be a physicist associated with another research institution. The graduate committee of the physics faculty will appoint a dissertation committee to supervise the student's research. The student's dissertation advisor will be the chair of the dissertation committee. The committee will recommend the student for admission to candidacy for the doctorate on recommendation of his or her advisor.

Program of Study and Course Requirements.

Normally, first-year graduate students will elect from the 100 series; second-year students from the 200 series. To obtain credit toward residence for a graduate course taken at Brandeis, a student must achieve a final grade of "B-" or better in that course. Students may obtain credit for advanced courses taken at another institution provided their level corresponds to the level of graduate courses at Brandeis and that an honor grade in these courses was obtained.

Dissertation and Final Oral Examination.

The doctoral dissertation must represent a piece of research of a standard acceptable to the faculty committee appointed for each Ph.D. candidate. The final oral examination, or defense, is an examination in which the student will be asked questions pertaining to the dissertation research.

Residence Requirements.

A student may obtain up to one year's residence credit toward the Ph.D. requirements for graduate studies taken at another institution. No transfer residence credit will be allowed toward fulfillment of the master's requirements.

Teaching.

It is expected that all graduate students will do some undergraduate teaching during the course of their studies.

Language Requirement.

There is no foreign language requirement for either the master's or the doctoral degrees.

Qualifying Examination.

In the first year, Quantum Mechanics (Physics 102) and Electromagnetic Theory (Physics 101) must be taken by all students unless they are exempted or excused. The final examinations in these courses (both fall and spring terms) serve as the written part of the qualifying examination. An oral examination given at the end of the first year completes the qualification requirements.

Courses of Instruction

Physics 101a. Electromagnetic Theory I	Electrostatics, magnetostatics, boundary value problems. Usually offered every year. Mr. Schnitzer	Physics 107a. Experimental Particle Physics	The principles upon which experimental atomic, nuclear and particle physics are based. Subjects discussed include: relativistic kinematics, interactions of energetic particles in matter, accelerators and beams, particle detectors and computer-based analysis techniques. Usually offered in odd years. Staff
Physics 101b. Electromagnetic Theory II	Maxwell's equations. Quasi-stationary phenomena. Radiation. Usually offered every year. Mr. Schnitzer	Physics 107b. Particle Phenomenology	The phenomenology of elementary particles, strong, weak and electromagnetic interactions. Topics include properties of particles, kinematics and quantum mechanics of scattering and decay, phase space, quark model, unitary symmetries and conversion laws. Usually offered in even years. Mr. Blocker
Physics 102a. Quantum Mechanics I	Nonrelativistic quantum theory and its application to simple systems; the harmonic oscillator, the hydrogen atom. Perturbation theory. Usually offered every year. Mr. Berko	Physics 108b. Introduction to Astrophysics	Offered irregularly as demand requires. Staff
Physics 102b. Quantum Mechanics II	Systems of identical particles. Coupling of angular momenta. Scattering theory. Time-dependent perturbation theory. Semiclassical analysis of interaction of atomic systems and electromagnetic waves. Usually offered every year. Mr. Berko	Physics 109a. Advanced Laboratory I	Methods and techniques of experimental research. Usually offered every year. Mr. Redfield
Physics 103a. Statistical Physics	Review of thermodynamics and probability theory. Statistical postulates and ensembles. Behavior of nonideal gases. Correlation functions, fluctuation theorems, Wiener-Khinchine theorem, generalized Nyquist relations. Mean-field theories of phase transitions; effect of fluctuations. Usually offered every year. Mr. Gross	Physics 109b. Advanced Laboratory II	Methods and techniques of experimental research. Usually offered every year. Mr. Blocker
Physics 104a. Solid-State Physics I	The formal description of periodic systems. The vibrational and electronic properties of solids. Band structure and the Fermi surface. The transport and optical properties of solids. Usually offered every year. Mr. Canter	Physics 110a. Mathematical Physics I	Complex variables; Fourier and Laplace transforms; special functions, partial differential equations; Hilbert space and spectral theory. Offered irregularly as demand requires. Mr. Grisaru
Physics 104b. Solid-State Physics II	Thermal, electric and magnetic properties of solids. Lattice vibrations. Specific heat. Structural probes. Fermi surfaces. Selected topics in superconductivity and ferromagnetism. Usually offered every year. Ms. Chakraborty	Physics 113a. First Year Tutorial I	A review of physics from the most elementary topics to those treated in other first-year graduate courses. The environment for an oral qualifying examination is reproduced in the tutorial. Usually offered every year. Ms. Chakraborty
		Physics 113b. First Year Tutorial II	A continuation of Physics 113a. Usually offered every year. Staff

Physics 137a. Nineteenth-Century Science	Investigations into the development of the conceptual framework for the description of “complex” systems in the physical sciences. Particular attention will be paid to the evolution of probabilistic descriptions. The historical setting will be outlined and the interaction and flow of ideas between the various disciplines traced. Offered irregularly as demand requires. Mr. Schweber	Physics 204a. Condensed Matter I	Topics in condensed matter theory. Usually offered in odd years. Mr. Gross
Physics 137b. Twentieth-Century Physics	The course will explore developments in physics during the 20th-century from a historical perspective paying particular attention to the wider context in which these advances took place. Offered irregularly as demand requires. Mr. Schweber	Physics 204b. Condensed Matter II	A continuation of PHYS 204a. Usually offered in odd years. Staff
Physics 152b. Biological Assembly	Physical principles in the construction of biological structures: forces, equilibria, symmetry and control mechanisms. Analysis of the structure and assembly of viruses, membranes and cellular organelles. Usually offered every third year. Mr. Caspar	Physics 207a. Plasma Physics	Electrodynamics and statistical mechanics of plasmas: the dielectric tensor, dispersion relations and plasma kinetic equations. Topics in plasma astrophysics, magnetic fusion and solid state plasmas. Usually offered every third year. Staff
Physics 200a. General Relativity I	Introduction to current research and problems in gravitational physics. Physical and mathematical background will be provided as needed, but emphasis will be on recent literature. Usually offered in odd years. Mr. Deser	Physics 208a. Cosmology	A survey of modern cosmological ideas with particular emphasis on observational data. Major topics include: the Friedman Big Bang models, physical processes in the early universe, galaxy formation, the 3°K Background Radiation, the present density of the universe, classical observational tests, the application of radio astronomy to cosmology. Usually offered every fourth year. Staff
Physics 200b. General Relativity II	Advanced topics in classical and quantum gravity and supergravity. Emphasis will be on recent literature. Usually offered every fourth year. Mr. Deser	Physics 210a. Particle Seminar I	Analysis of important recent developments in particle physics. Usually offered every year. Messrs. Abbott, Deser, Grisaru and Schnitzer
Physics 202a. Quantum Mechanics III	Nonrelativistic field theory and relativistic quantum mechanics. Graphical version of time-dependent perturbation theory. Application of group theory to quantum mechanics. Usually offered every year. Mr. Grisaru	Physics 210b. Particle Seminar II	A continuation of PHYS 210a. Usually offered every year. Messrs. Abbott, Deser, Grisaru and Schnitzer
Physics 202b. Quantum Fields	Introduction to relativistic quantum field theory. The Feynman diagram perturbative expansion will be employed to discuss gauge theories and, in particular, the standard model of fundamental interactions. Usually offered every third year. Staff	Physics 211a. Computational Physics	Numerical differentiation and integration. Curve fittings. Numerical solution of elliptic, parabolic and hyperbolic differential equations. Molecular dynamics. Monte Carlo simulation. Monte Carlo renormalization group technique. Usually offered in odd years. Staff
		Physics 212a. Condensed Matter Seminar I	Analysis of important recent developments in condensed matter physics. Usually offered every year. Staff

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Physics 212b. Condensed Matter Seminar II	A continuation of PHYS 212a. Usually offered in even years. Staff	Physics 304a. Solid State Seminar I	Analysis and discussion of recent important developments in solid-state physics. Usually offered every third year. Staff
Physics 213a. Advanced Examination Tutorial I	Supervised preparation for the advanced examination. Usually offered every year. Staff	Physics 305a. Liquid Crystals I	This seminar studies recent advances in the physics of liquid crystals and related systems such as microemulsions, colloidal suspensions and polymer solutions. Usually offered every year. Mr. Meyer
Physics 213b. Advanced Examination Tutorial II	Supervised preparation for the advanced examination. Usually offered every year. Staff	Physics 305b. Liquid Crystals II	A continuation of PHYS 305a. Usually offered every year. Staff
Physics 240b. Biophysical Research	See BIOP 200 b. Usually offered every year. Mr. Caspar	Physics 306a. Condensed Matter III	Seminar in advanced topics and latest developments in theoretical condensed matter physics. Usually offered every year. Staff
Physics 301a. Astrophysics Seminar I	Advanced topics and current research in astrophysics will be discussed. Usually offered every year. Mr. Roberts	Physics 306b. Random Systems	Seminar in advanced topics and latest developments in the theory of random systems. Usually offered every year. Staff
Physics 301b. Astrophysics Seminar II	A continuation of PHYS 301a. Usually offered every year. Mr. Roberts	Physics 311a. Mathematical Physics II	The mathematics and physics of the quantum string theory of elementary particles. Usually offered every fourth year. Mr. Pendleton
Physics 302a. Particle Seminar III	Seminar covers latest advances in elementary particle physics. Will include student presentations and invited speakers. Usually offered every year. Mr. Blocker	Research Courses	
Physics 302b. Particle Seminar IV	A continuation of PHYS 302a. Usually offered every year. Mr. Bensinger	Physics +05d. Experimental Elementary Particle Physics	Mr. Blocker
Physics 303a. Positron Seminar I	Seminar covers latest developments in atomic, solid-state and surface physics as studied using positron techniques. Will include student presentations and invited speakers. Usually offered every year. Mr. Berko	Physics +06d. Experimental Elementary Particle Physics	Mr. Bensinger
Physics 303b. Positron Seminar II	A continuation of PHYS 303a. Usually offered every year. Mr. Canter	Physics +07d. Experimental Elementary Particle Physics	Mr. Kirsch

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Physics 408d. Theoretical Elementary Particle Physics	Mr. Abbott	Physics 422d. Mathematical Physics	Mr. Grisaru
Physics 409d. Theoretical Elementary Particle Physics	Mr. Deser	Physics 423d. Mathematical Physics	Mr. Schweber
Physics 410d. Theoretical Elementary Particle Physics	Mr. Grisaru	Physics 424d. Mathematical Physics	Mr. Pendleton
Physics 411d. Theoretical Elementary Particle Physics	Mr. Pendleton	Physics 425d. Statistical Physics	Mr. Gross
Physics 412d. Theoretical Elementary Particle Physics	Mr. Schnitzer	Physics 426d. Astrophysics	Mr. Goldstein
Physics 413d. Theoretical Elementary Particle Physics	Mr. Schweber	Physics 427d. Astrophysics	Mr. Roberts
Physics 414d. Experimental Solid- State Physics	Mr. Berko	Physics 428d. Astrophysics	Mr. Wardle
Physics 415d. Experimental Solid- State Physics	Mr. Canter	Physics 429d. Structural Biology	Mr. Caspar
Physics 416d. Statistical Physics	Mr. Heller	Physics 430d. Experimental Solid- State Physics	Mr. Jensen
Physics 417d. Theoretical Solid- State Physics	Staff	Physics 431d. Experimental Condensed-Matter Physics	Staff
Physics 418d. Theoretical Solid- State Physics	Mr. Gross	Physics 432d. Experimental Atomic and Molecular Physics	Mr. Wellenstein
Physics 419d. Theoretical Solid- State Physics	Mr. Lange	Physics 436d. Biophysics	Mr. Redfield
Physics 420d. Theoretical Solid- State Physics	Staff	Physics 437d. Experimental Condensed-Matter Physics	Mr. Meyer
Physics 421d. Relativity	Mr. Deser		

Politics

Objectives

The graduate program in politics, leading to the degree of Doctor of Philosophy, emphasizes comprehensive professional training by stressing both the fundamentals of the discipline grounded in the study of political thought and institutions and the requirements of method and analytical skills.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. Normally, the student's undergraduate training must be in a field of social sciences to be considered for admission to this program. Applicants are expected to take the Graduate Record Examination.

Faculty

Professor
Seyom Brown,
Chair:
International relations.
American foreign
policy.

Professor
Robert J. Art:
International relations.
American foreign
policy.

Professor
Donald Hindley:
Comparative politics.
Southeast Asia; Latin
American politics.

Professor
Mark Hulliung:
Political theory.

Professor
Martin A. Levin,
Director, Gordon
Public Policy Center:
American politics.
Urban politics.

Professor
Ruth S. Morgenthau:
Comparative politics.
Africa.

Professor
Susan M. Okin:
Political theory.

Professor
Peter Woll:
American politics.
Administrative law.

Associate Professor
Jeffrey B. Abramson:
Political theory.
Constitutional law.

Associate Professor
Steven Burg:
Comparative politics.
U.S.S.R. Eastern
Europe.

Associate Professor
R. Shep Melnick:
American politics.
Public law and
regulation.

Associate Professor
Ralph Thaxton:
Comparative politics.
Peasants and
revolution.

Assistant Professor
James Hollifield:
Comparative politics.
Political economy.

Assistant Professor
Ethan Kapstein:
International
relations.
International political
economy.

Assistant Professor
Sidney Milkis:
American government.

Degree Requirements

Master of Arts

Normally, no one will be accepted into the program who is not a doctoral candidate. However, the M.A. degree may be awarded upon satisfactory completion of one year of residence with a minimum of six courses, the submission of an approved specimen of graduate-level scholarly writing and either the demonstration of proficiency in a foreign language or satisfactory completion of two semester courses of statistics or satisfactory completion of the scope and methods seminar as described under the Ph.D. research tools requirements below. (Courses taken in language, statistics or scope and methods will not be counted toward the six courses required for the M.A. degree.)

Doctor of Philosophy

Students should note certain special features of the program, in particular, (a) instruction in small seminars under close faculty supervision, (b) supervised independent study facilities within the department, (c) supervised teaching assistantships, (d) opportunities for study in the consortium of universities in the Boston area, and (e) the opportunity to incorporate work in related and relevant fields, e.g., economics, anthropology, philosophy. Each student is assigned to a departmental advisor who will help plan a professional and pertinent program of study. A continuity of faculty direction is insured throughout the program with allowance for shifts in curricular interest.

Program of Study.

The student must complete two years in residence and a minimum of 12 semester courses. Students with an M.A. in political science from other institutions may petition at the end of one year to have their previous graduate courses accepted for Brandeis credit; this may relieve them of as much as a year of residence requirement. (However, they must satisfy all Brandeis requirements: distribution of curriculum, language, etc.) For distribution, each graduate student will be required to take three of the following fields: American Government, Comparative Government, International Relations, Political Theory or two of the above plus a category of study at the graduate level in another department of the University, as shall be judged valid for the student's program by this department.

Within each subfield chosen, students are expected to have a broad knowledge of the major theoretical and analytical approaches, a more intensive familiarity with one or more functional areas of the subfield and special expertise in particular geographic areas, policy issues and/or historical periods. The requirements for a student majoring in each subfield are somewhat more extensive than those for a student choosing it as a second or third field. The specific requirements for each subfield may be obtained from the politics department.

The standard work load for full-time students is at least three courses in each semester of their first two years of study. Fourth courses and audits are encouraged, but the load is deliberately set so that the student may supplement his or her regular course work with independently motivated reading and scholarship. Reading courses will not be offered to first-semester students and will be discouraged generally during the first year. By the end of the first year, students should have identified their major and at least one of their minor fields of interest, and should make this known to their advisor and the Graduate Studies Chairman.

Research Tools Requirement.

Prior to admission to Ph.D. candidacy, each student is required to: (1) pass with a graduate grade (B- or above) the politics department's Seminar in Scope and Methods. Credit for this one-semester course may be counted toward fulfillment of the Ph.D. course requirements. A similar course taken elsewhere may be used to fulfill this requirement, subject to the approval of the Graduate Committee. (2) Either a. pass a language examination (normally administered within the department) designed to test for a reading knowledge of a foreign language sufficient to conduct doctoral dissertation research, or b. pass with a B- or better course work in statistics approved by the graduate studies chairman. Neither courses taken in conjunction with the language examination nor statistics courses may be counted for course credit toward the Ph.D.

Evaluation of First Year.

At the end of each student's first year in the graduate program, there will be a consultation between the student and three members of the department to evaluate the student's academic progress, and to help plan the student's subsequent work.

Research Paper.

Each second-year graduate student is required to submit a high-quality research paper, which must be approved in its final version by two members of the department (appointed by the graduate advisor in consultation with the student) before the student will be allowed to take the comprehensive Ph.D. qualifying examinations.

Candidacy for the Ph.D.

A student may be admitted to candidacy for the Ph.D. degree upon completing the course and research paper requirements, passing the qualifying examination, fulfilling the methodology requirement and obtaining departmental approval of the subject and preliminary precis of the dissertation.

Normally at the end of the fourth semester or early in the fifth, a formal oral and written examination for candidacy for the Ph.D. will be given covering the student's three fields but with emphasis on the subfield(s) in which the student has done the most work. Each of the examinations is individual: it responds to the approved program of the student. The written examinations may be taken, upon arrangement, within any four-month period. The orals are taken no later than two weeks after the last written examination. Students are examined orally in their three fields simultaneously.

However, each student must complete the Ph.D. qualifying examinations by the end of his/her fifth semester in the program, and must submit a dissertation prospectus by the end of the sixth semester. Any extension must be granted specifically by the Graduate Committee.

Dissertation and Defense.

The dissertation will be completed under the supervision of an appropriate member of the departmental faculty. The dissertation proposal must be sponsored by a departmental committee of at least two members appointed by the department chairman in consultation with the Graduate Committee. It is assumed that the writing of the dissertation will take at least one year and, barring exceptional circumstances, not more than two and one-half years. The student must successfully defend the dissertation at a final oral examination conducted by his/her two departmental supervisors and another faculty member from outside the department or from another university.

Teaching Assistantships.

As determined by funds and undergraduate enrollments, the department compensates students for teaching assistant work in an amount customarily based on the type and amount of work performed. First-year students do not normally receive teaching assistantships. It is the policy of the department that teaching experience is a normal and necessary part of the graduate training program and that ideally all students should have this opportunity.

Courses of Instruction

Seminars for Graduate Students

Politics 201b.
Seminar: Political Research and Analysis

The objective of the course is to provide students with an introduction to research methods and techniques of analysis appropriate for processing and analyzing political data. The emphasis will be on teaching students to understand and critique various methodologies used in political science, including historical/ structural analysis, survey research, statistical analysis and formal theory.

The first section of the course will be devoted to some preliminary reflections on the study of politics, particularly the scientific method, ethical and philosophical issues (e.g., a critique of behavioralist and positivist approaches), and the criteria for good theory. The course will also introduce students to the basic concepts and uses of statistics, particularly correlation, regression and problems of causal inference.

Usually offered in even years.

Staff

Politics 203a.
Seminar: Comparative Politics

An examination of the approaches, concepts and theories of the field of comparative politics.

Usually offered in even years.

Staff

Politics 203b.
Seminar: Selected Topics in Comparative Politics

This course is intended to provide graduate students an opportunity to engage in research and discussion of selected issues in comparative politics. Each term it will deal with a different topic in greater depth than is possible in the context of the department's field seminar in this area. The focus of the course will vary each time it is offered, which is expected to be in alternate years.

Usually offered in even years.

Staff

Politics 204a.
Seminar: International Relations Theory

An examination of the approaches, concepts and theories in the field of international politics.

Usually offered in odd years.

Staff

Politics 204b.
Seminar: Selected Topics in International Relations

This course is intended to provide graduate students an opportunity to engage in research and discussion of selected issues in international relations. Each term it will deal with a different topic in greater depth than is possible in the context of the department's field seminar in this area. The focus of the course will vary each time it is offered, which is expected to be in alternate years.

Usually offered in even years.

Staff

Politics 205a.
Seminar: American Politics

An examination of the approaches, concepts and theories in the field of American politics.

Usually offered in even years.

Staff

Politics 205b.
Seminar: Advanced Topics in American Politics

This course is intended to provide graduate students an opportunity to engage in research and discussion of selected issues in American politics. Each term it will deal with a different topic in greater depth than is possible in the context of the department's field seminar in this area. The focus of the course will vary each time it is offered, which is expected to be in alternate years.

Usually offered in odd years.

Staff

Politics 206a.
Seminar: Political Theory

An examination of the approaches and concepts in the field of political theory.

Usually offered in odd years.

Staff

Politics 206b.
Seminar: Advanced Topics in Political Theory

This course is intended to provide graduate students an opportunity to engage in research and discussion of selected issues in political theory. Each term it will deal with a different topic in greater depth than is possible in the context of the department's field seminar in this area. The focus of the course will vary each time it is offered, which is expected to be in alternate years.

Usually offered in even years.

Staff

Seminars for Graduate Students and Advanced Undergraduates

Politics 208b.
Seminar: Liberty and Equality in American Politics

Examines how competing conceptions of liberty and of equality have affected American political life. Readings include the *Federalist Papers*, Tocqueville's *Democracy in America*, the Lincoln-Douglas debates and material on freedom of the press, freedom of religion, desegregation, affirmative action and emergency powers.

Usually offered in even years.

Mr. Melnick

Politics 215b.
Seminar: Constitutional Law and Theory

An advanced research seminar on selected issues of constitutional law.

Usually offered in even years.

Mr. Woll

Politics 218b. Research Seminar: Elections in Theory and Practice	<p>This course provides students with an opportunity to research a topic of interest on elections in the United States. Attention will be paid to various theories that have been offered to explain voting, as well as the basic empirical methodologies used to investigate political behavior. In consultation with the instructor, each student will undertake the completion of a research project based on a computer analysis of recent elections in the United States.</p> <p>Usually offered in odd years.</p> <p>Mr. Milkis</p>	Politics 248a. Seminar: Contemporary Chinese Politics	<p>This course provides a broad and in-depth understanding of key issues in contemporary Chinese politics — China after 1949. It is especially concerned with the role of the state in promoting economic development, social betterment, political stability and justice.</p> <p>Usually offered every year.</p> <p>Mr. Thaxton</p>
Politics 222b. Seminar: Policy Analysis and Policy Implementation	<p>This is a course in political economy — the interface of economics and political science. It uses concepts of economics and political science to develop better analysis of public sector issues in order to ameliorate social problems. It integrates formal techniques of analysis (such as cost-benefit analysis, decision theory, modeling), with a concern for political feasibility and the constraints of implementation, especially those flowing from the nature of organizations. Problem areas will be chosen to illustrate the dual dilemmas in imperfect public interventions.</p> <p>Usually offered every year.</p> <p>Mr. Levin</p>	Politics 252a. Seminar: The Political Economy of Advanced Industrial Democracies	<p>The seminar is designed to introduce students to the history and theory of political economy, giving particular attention to the relationship between capitalism, socialism and democracy. We also shall devote considerable time to the study of the development of the political economies of Western Europe and North America since 1945. This study will seek to determine the scope and role of government in the economies of the advanced industrial democracies.</p> <p>Usually offered every year.</p> <p>Mr. Hollifield</p>
Politics 223a. Seminar: Government, Business and American Politics	<p>This seminar examines the interaction of economics and politics in the American political system. A good deal of emphasis is placed on the politics of regulation, and on the philosophical and historical context in which government-business relations have developed. Using environmental and consumer regulation as examples, the course examines the prospects for regulatory reform, and the effects on the public interest of political efforts to curb the impact of federal intervention in society.</p> <p>Usually offered in odd years.</p> <p>Mr. Milkis</p>	Politics 254b. Seminar: Comparative Public Policy	<p>The purpose of the seminar is to introduce the student to the basic theories and concepts used in order to compare public policies cross-nationally. An assumption of the seminar is that the analysis is concerned with national systems and less concerned with international systems. Our main concern will be to use policy analyses within systems.</p> <p>Usually offered every third year.</p> <p>Staff</p>
Politics 231b. Seminar: Advanced Topics in Soviet Politics	<p>This course is intended to provide advanced undergraduate and graduate students with an opportunity to engage in research and discussion of selected issues in Soviet domestic politics or foreign policy.</p> <p>Usually offered in even years.</p> <p>Mr. Burg</p>	Politics 257a. Seminar: Politics and Society in Western Europe	<p>The course treats Western Europe as a case study in political development and as a testing ground for theories of political support and legitimacy. It is designed to deal with three major topics relating to the political development of Western Europe: (1) the transition from feudalism and the creation of the modern capitalist state; (2) the processes of legitimation of the institutional order during and after the industrial revolution; and (3) the accommodation of industrial workers and the rise and fall of class politics.</p> <p>Usually offered in even years.</p> <p>Mr. Hollifield</p>
Politics 247b. Seminar: The Modern Chinese Revolution	<p>This course provides an in-depth exploration of the origins, process and consequences of the modern Chinese revolution. It focuses specifically on Western social science theories and interpretations of the revolution. It also provides a comprehensive perspective on revolution in 20th-century China and revolutionary movements in other parts of the globe.</p> <p>Usually offered every year.</p> <p>Mr. Thaxton</p>	Politics 258a. Seminar: Political Participation	<p>An examination of the major models, or conceptualizations of participation and their ideological or political underpinnings, and an exploration of the variety of actual forms of participation and "regime-type," and attempts to differentiate "participation" from other forms of political behavior, such as "mobilization" or "involvement," and thereby distinguish between "citizens" and "subjects."</p> <p>Usually offered in even years.</p> <p>Mr. Burg</p>

<p>Politics 266b. Seminar: Issues in International Political Economy</p> <p>Selected theories of international relations will be used to analyze current problems in international political economy. Issues such as global debt, Third World development, North-North and North-South economic relations and resource politics will be examined in depth.</p> <p>Usually offered every year.</p> <p>Mr. Martin</p>	<p>Politics 302-317a and b. Readings in Politics</p> <p>Offered every year.</p> <p>302a and b. Mr. Brown</p> <p>303a and b. Mr. Hindley</p> <p>306a and b. Ms. Morgenthau</p> <p>307a and b. Mr. Melnick</p> <p>308a and b. Mr. Woll</p> <p>309a and b. Mr. Art</p> <p>310a and b. Mr. Hulliung</p> <p>311a and b. Mr. Levin</p> <p>312a and b. Ms. Okin</p> <p>313a and b. Mr. Abramson</p> <p>314a and b. Mr. Thaxton</p> <p>315a and b. Mr. Burg</p> <p>316a and b. Mr. Hollifield</p> <p>317a and b. Mr. Milkis</p>
<p>Politics 274b. Problems of National Security</p> <p>An analysis of current issues in national security policy through examination of basic theories on the role and utility of force in international relations. Topics covered include nuclear deterrence, force planning and budgeting arms control, force projection in the Persian gulf, proliferation and the NATO alliance.</p> <p>Usually offered every year.</p> <p>Mr. Art</p>	<p>Politics 400-416d. Dissertation Research</p> <p>Independent research for the Ph.D. degree.</p> <p>400d. Mr. Abramson</p> <p>402d. Mr. Brown</p> <p>403d. Mr. Hindley</p> <p>406d. Ms. Morgenthau</p> <p>408d. Mr. Woll</p> <p>409d. Mr. Art</p> <p>410d. Mr. Hulliung</p> <p>411d. Mr. Levin</p> <p>412d. Mr. Burg</p> <p>413d. Ms. Okin</p> <p>414d. Mr. Thaxton</p> <p>415d. Mr. Hollifield</p> <p>416d. Mr. Milkis</p> <p>Other advanced undergraduate courses may, subject to the approval of the graduate studies chairman, be taken for graduate credit.</p>
<p>Politics 279a. Seminar: The Politics of Food Security</p> <p>Why is there hunger in a world full of grain? The issue is examined from the international, national, regional and local levels. Why is economic growth not enough to end famine? What policies and programs promote adequate production and equitable distribution of food supplies? Readings will focus on international as well as national efforts to secure access to food at acceptable prices. How food policy is formulated and affects the rise and fall of governments is examined in case studies.</p> <p>Usually offered every year.</p> <p>Ms. Morgenthau</p>	

Psychology

Objectives

The graduate program in psychology leads to the degree of Doctor of Philosophy. The goal of the program is to develop competent research psychologists and teachers who will become contributors to knowledge in psychology. Toward this end, an emphasis is placed on research activity, starting in the first term of graduate study. The program of study reflects a belief that the student should develop an area of research specialization and also should be exposed to a range of topics in general psychology. Dissertation supervision is available in the following areas: sensation, perception, memory, learning, thinking, comparative, developmental, personality, psychopathology, social psychology, linguistics and cognitive science.

The psychology department also offers a program leading to the degree of Doctor of Philosophy in Psychology with specialization in linguistics and cognitive science. This program focuses on mental representation, in particular the representation and processing of language. The program is designed to equip students with a broad understanding of contemporary linguistic theory and its relationships to other areas of psychology. The goal of the program is to train students to carry out independent, original theoretical or experimental research and to be able to bring their research to bear on wider issues.

Admission

The general requirements for admission to the graduate school, as specified in an earlier section of this catalog, apply to candidates for admission to this area of study.

An undergraduate major in psychology is not required. Students with inadequate preparation may make up their deficiencies during their first year, but without residence credit. Students are admitted on a competitive basis, which includes evaluation of previous academic records, recommendations and results of the Graduate Record Examination (Aptitudes and Psychology Achievement Tests).

Applications to linguistics and cognitive science should specifically mention interest in this program.

Faculty

Professor
Leslie A. Zebrowitz,
Department Chair;
Social psychology.
Person perception.

Professor
Ray S. Jackendoff,
Chair, Linguistics and
Cognitive Science;
Linguistics, Semantic
theory, Music,
Consciousness.

Professor
Raymond Knight;
Clinical psychology.
Experimental
psychopathology.

Professor
James R. Lackner,
Director, Spatial
Orientation
Laboratory: Human
experimental
psychology.
Psycholinguistics.

Professor
Joan Maling;
Linguistics, Syntactic
theory. Historical
syntax. Metrics.

Professor
Ricardo B. Morant,
Chair, Program in
Experimental/
Physiological
Psychology;
Experimental
psychology.
Perceptual
mechanism. Sensation
and perception.

Professor
Alan S. Prince;
Phonological theory.
Metrics.

Adjunct Professor
Zick Rubin; Social
psychology.
Interpersonal
relationships.

Professor
James Todd;
Layout and motion
perception.

Professor
Arthur Wingfield;
Human memory.
Cognitive processes.

Professor
Edgar Zurif;
Neurolinguistics.
Psycholinguistics.

Adjunct Professor
Ashton Graybiel

Adjunct Professor
Marcel Kinsbourne

Associate Professor
Teresa M. Amabile,
Chair, Program in
Social/
Developmental
Psychology; Social
psychology. Creativity.

Associate Professor
Jane B. Grinstead;
Linguistics, Language
acquisition, Syntactic
and lexical theory.

Associate Professor
**Maurice
Hershenson;**
Visual space
perception, Visual
information
processing.

Associate Professor
Marjorie Lachman;
Life-span
development, Adult
personality.

Visiting Associate
Professor
Leonard Saxe;
Social psychology.

Associate Professor
**Malcolm W.
Watson;**
Developmental
psychology.

Associate Professor
Jerome Wodinsky;
Comparative
psychology, Learning
theory, Sensory
physiology.

Assistant Professor
Michael Berbaum;
Group problem
solving and decision
making.

Assistant Professor
D. Lynn Halpern;
Sensory physiology.
Visual and auditory
psychophysics.

Assistant Professor
Steven Kramer;
Infant perception and
development.

Assistant Professor
Maira Yip;
Autosegmental and
metrical phonology.
Tone systems.

Lecturer with rank of
Associate Professor
John Frampton;
Linguistics.

Lecturer with rank of
Assistant Professor
Joseph Cunningham;
Developmental
psychopathology.

Lecturer
Paul Bloom;
Linguistics.

Degree Requirements

Doctor of Philosophy

Program of Study. Although there is a two-year minimum residency requirement, four years of full-time graduate study are usually required for the Ph.D. The student is expected to carry the equivalent of 16 credit units per term during residency.

Research. Each student will devote one-quarter of his or her time to research the first term of the entering year. For all subsequent terms, students shall devote a minimum of one-half time to research.

Research Reports. Students will submit reports on their research for the preceding year, in journal form, in time to permit evaluation of the first project by the end of the third term, and of the second project by the end of the fifth term. Satisfactory completion of the research projects is required for continuation in the program. Students who have satisfactorily completed the research requirements will be permitted to continue their work toward the doctorate with no formal requirement of a master's degree.

Course Requirements. Entering students will take two advanced courses and Psychology 315d, in the first term of residence, one advanced course and Psychology 210b in the second term. After that they shall take two advanced courses per term in the second year, and one each term thereafter until admitted to candidacy for the doctorate. Each term, a student must take at least one graduate level course or seminar (100-level or above) that is not an Independent Readings or Research course. Only selected 100-level courses, determined by the psychology department, will count as advanced, graduate level courses. Graduate level course selection will not be restricted to the psychology department but will be arranged by the student in consultation with the faculty advisor.

Qualifying Examinations. Before being admitted to candidacy for the doctorate, each student must also pass a qualifying examination. During the student's third year, he or she will be examined in the historical, theoretical and empirical literature related to the student's area of specialization, broadly conceived. The chairman of the department, in consultation with the student and advisor, will appoint a three-member committee to administer the qualifying examination. The examination may be in either oral or written form. A student may petition the department to take the examination a second time if necessary.

Breadth Requirement.

All graduate students must demonstrate breadth in the field of psychology before being admitted to candidacy for the Ph.D. This breadth requirement is fulfilled by demonstrating competence in at least six of the nine areas listed below. The requirements may be satisfied in any of three ways:

- by having completed an undergraduate or graduate course in that area,
- by completing an undergraduate or graduate course offered in that area at Brandeis,
- by successfully passing the equivalent of any undergraduate final examination for that course.

Of the six courses, a minimum of two should be taken from areas in Group A and a minimum of two from Group B.

Group A

1. Physiological/Sensory Processes
2. Perception
3. Learning/Comparative
4. Cognition/Memory
5. Cognitive Science/Linguistics

Group B

1. Developmental
2. Social
3. Personality
4. Abnormal

Teaching Assistant Requirements.

Each student must work as a teaching assistant for a minimum of four courses, including the course Introduction to Psychology and at least one of the following courses: Statistics, Experimental, Developmental, Cognitive Processes, Sensory Processes, Perception, Social, Personality or Abnormal.

Language Requirement.

There is no foreign language requirement.

Admission to Candidacy.

A student may be admitted to candidacy for the doctorate upon fulfilling the above requirements.

Dissertation and Defense.

Following the completion of all examinations, the student will prepare a prospectus of the proposed dissertation study in consultation with a faculty dissertation sponsor. The prospectus may be based on preliminary research conducted prior to the student's admission to candidacy for the doctorate. Upon approval by the faculty of the department, a dissertation committee of three or more members will be appointed by the department chair, including the dissertation sponsor as chair of the committee. The dissertation sponsor will be responsible for advising the student throughout the performance of his or her work, in consultation with the remaining members of the committee at appropriate times in the course of the work. From time to time, the committee will report the student's progress to the department faculty.

	<p>The dissertation should provide evidence of originality, scholarship and research ability. It should be a contribution to knowledge, ordinarily an experimental investigation, but not necessarily so. Upon submission to the chair of the department of a copy of the dissertation, signed by all members of the dissertation committee and one member from outside of the University, and a successful defense of the dissertation before all members of the department, the award of the Ph.D. will be recommended to the Faculty Council of the Graduate School.</p>		<p>b. All students will take the following courses every year until they are admitted to candidacy: Seminar in Cognitive Science Two of: Topics in Syntax, Topics in Semantics, Topics in Phonology</p> <p>c. Beginning in the second term every student will take a minimum of one research course per term. As part of the research requirement students attend the research seminar every year.</p> <p>All programs must be approved by the graduate advisor.</p>
Master of Arts	<p>Students in the Ph.D. program may petition for a Master of Arts degree upon completion of the following requirements: (1) One year minimum residency. (2) Acceptable master's thesis. (An acceptable first-year research report will count as a master's thesis.) (3) Completed breadth requirements.</p>	Breadth Requirements.	<p>In addition to the areas covered by the course requirements, students must demonstrate competence in four areas, two from Group A and two from Group B.</p> <p>Group A: Psycholinguistics; neurolinguistics; language acquisition; historical/comparative linguistics.</p> <p>Group B: Cognitive psychology; statistics (graduate level); logic/philosophy of mind; computer science/artificial intelligence.</p> <p>Courses offered for satisfaction of the breadth requirement must be approved by the Linguistics and Cognitive Science faculty.</p>
Ph.D. in Psychology with Specialization in Linguistics and Cognitive Science.	<p>This program focuses on the development of formal theories of mental representation. It emphasizes the unity behind approaches to mind within cognitive psychology and linguistics, with attention to the important contributions of computer science and philosophy. Application should specifically mention an interest in this program.</p> <p>The degree requirements are as given above, except in the following respects:</p>	Research Reports.	<p>Students will submit reports on their research in time to permit evaluation of the first project by the end of the third term, and of the second project by the end of the fifth term. Satisfactory completion of the research projects is required for continuation in the program.</p>
Course Requirements.	<p>a. All students will take the following courses in their first year: Syntax Phonology Research Seminar (for credit) Seminar in Cognitive Science One of: Topics in Syntax, Topics in Semantics, Topics in Phonology</p>		

Courses of Instruction

Psychology 120b. Man in Space	<p>This course concerns the physiological and psychological consequences of prolonged exposure to weightlessness. The topics covered will include a) how orbital flight is achieved, b) spacecraft life support systems, c) circulatory dynamics, d) sensory-motor control and vestibular function in free fall. Emphasis is placed on the physiological and psychological adaptations necessary in space flight and how astronauts must readapt on return to earth.</p> <p>Usually offered every year.</p> <p>Mr. Lackner</p>	Psychology 132b. The Self in Social Psychology	<p>Our perceptions of our own identities, values, self-worth and image to others influence our feelings and actions. In this seminar, we examine current theories of the self in social psychology, such as self-perception theory, self-awareness theory and schema theory and consider their implications for many aspects of social life.</p> <p>Usually offered in even years.</p> <p>Mr. Ross</p>
Psychology 130b. Life-Span Development: Adulthood and Old Age	<p>Seminar on advanced topics in life-span developmental theory and methodology. Substantive emphasis will be on intellectual and personality changes that occur in the second half of life.</p> <p>Usually offered in odd years.</p> <p>Ms. Lachman</p>	Psychology 135b. Seminar in Social Cognition	<p>This course deals with research in impression formation and emotion perception. Information about people's psychological attributes that is provided in their face, voice and bodily movements will be considered. Issues of stereotyping, accuracy and errors in person perception will be treated as well as developmental differences, individual differences and cultural differences.</p> <p>Usually offered in even years.</p> <p>Ms. Zebrowitz</p>

**Psychology 136a.
Advanced Topics in
Developmental
Psychology**

The objective of this course is to provide students with detailed information about theories and special topics of research in developmental psychology. A different topic will be selected each year.

Usually offered every year.

Mr. Watson

**Psychology 137b.
Social Interaction**

Study of interaction among humans, chiefly from an experimental perspective. Such processes as social facilitation, imitation, conformity, cooperation and competition, bargaining, coalition formation, group problem solving and group decision making are examined. Models of interaction involving conflict are applied to the analysis of behavior in selected natural contexts.

Usually offered in odd years.

Mr. Berbaum

**Psychology 139a.
Advanced Topics in
Social Psychology:
Mental Health
Research and Policy**

Recent research on mental health problems and treatment will be analyzed from a social psychological perspective. The focus will be on research that elucidates the environmental component of mental disorders and treatment. Issues such as the relationship between homelessness and mental illness and the role of hospitalization in treating substance abuse will be considered.

Signature of instructor required.

Usually offered in odd years.

Mr. Saxe

**Psychology 145b.
Aging in a Changing
World**

Psychological issues related to the aging processes are examined in a multi-disciplinary perspective. Social, biological, political, economic and historical/cultural factors that affect and are affected by psychological aging are considered. Topics include intellectual functioning, mental illness, memory loss, personality changes, social support, coping with stressful life events and physiological changes in later life.

Usually offered in odd years.

Ms. Lachman

**Psychology 150b.
Organizational
Psychology**

This course covers the fundamentals of industrial/organizational psychology, including the topics of leadership, work motivation, organizational innovation, corporate culture, personnel selection, job evaluation and group dynamics.

Usually offered in even years.

Ms. Amabile

**Psychology 153a.
Consciousness**

This course will explore the nature of conscious awareness and its relation to the mind and the body. After going through the philosophical history of the mind-body problem, we will discuss the role of consciousness in psychological theory from William James, through the behaviorist movement, to contemporary cognitive science. The course will dissect the differences between being conscious and being intelligent, being self-conscious and being able to use a language. Case studies to illuminate the discussion will be drawn from speculations regarding human infants, animals, computers and exotica such as split-brain patients and multiple personalities.

Usually offered every third year.

Messrs. Jackendoff and Morant

**Psychology 154a.
Human Memory**

This course presents a systematic analysis of current and traditional memory research and theory as it sheds light on both normal memory and cognitive function and on memory deficits following cerebral damage.

Usually offered every year.

Mr. Wingfield

**Psychology 155a.
Seminar in Visual
Perception**

Seminar will discuss major issues in perception.

Usually offered every year.

Mr. Hershenson

**Psychology 156b.
Perceptual
Development**

The seminar will consider recent theories and experiments that investigate perceptual development of infants. What does the infant know and when does he first know it?

Usually offered in even years.

Mr. Morant

**Psychology 157b.
Models of Human
and Machine Vision**

This course will consider how a visual analysis of patterns of light can be used to determine the structures and movements of objects in the environment. An integrative approach to this problem will be adopted, which will survey current research and theory from perceptual psychology, neurobiology and artificial intelligence.

Usually offered in even years.

Mr. Todd

**Psychology 158b.
Visual Psychophysics**

This seminar will cover current issues in spatial and binocular visual research. Modeling efforts in these areas will be evaluated in light of known neurophysiology of the visual system.

Usually offered in even years.

Ms. Halpern

**Psychology 160b.
Seminar on Sex
Differences**

This course will examine societal sex roles and lay beliefs about sex differences in light of evidence bearing on: (1) actual sex differences in ability and/or personality; (2) biological vs. social explanations for sex differences; (3) motivational and cognitive biases in the perception of group differences.

Usually offered every year.

Ms. Zebrowitz

**Psychology 161a.
Clinical Psychology
Practicum I**

This course, in conjunction with Psychology 161b, provides an intensive, supervised practicum experience in the provision of mental health services. Students pursue a program of reading and spend one day a week working in a clinical facility. Weekly class meetings are structured to provide opportunities for personal and professional growth through discussion of individual experiences in the clinical setting.

Usually offered every year.

Mr. Cunningham

**Psychology 161b.
Clinical Psychology
Practicum II**

A continuation of Psychology 161a.

Usually offered every year.

Mr. Cunningham

**Psychology 165a.
Seminar in
Experimental
Psychopathology**

This course will focus on how researchers study deviant behavior and what they have learned about the causes and life courses of psychopathology. It will focus on two broad classes of psychopathology — sexual aggression and schizophrenia — and will examine the interplay of biological and environmental variables that cause and sustain disordered behavior. Examples of some variables that will be considered include heredity, birth defects, family variables like child abuse and child rearing attitudes.

Usually offered every third year.

Mr. Knight

**Psychology 167b.
Schools of
Psychotherapy**

Theories and techniques of several schools of psychotherapy and behavior modification are considered. The theories of personality, methods of intervention, goals of therapy and relevant research will be emphasized.

Usually offered every year.

Mr. Knight

**Psychology 168a.
The Psychology of
Creativity**

The purpose of this course will be (1) to explore the foundations of modern theory and research on creativity, and (2) to examine methods of stimulating creative thought and expression. The course material will include (1) psychodynamic, behavioristic, humanistic and social psychological theories of creativity, (2) personality studies of creative individuals, (3) studies of creative environments, (4) methods of defining and assessing creativity and (5) programs designed to increase both verbal and non-verbal creativity. Signature of instructor required.

Usually offered every year.

Ms. Amabile

**Psychology 169b.
Disorders of
Childhood**

This course will review issues of theory, research and practice in the areas of child and adolescent psychopathology and treatment. Special attention will be given to the need for examining abnormality in the context of normal developmental processes. The relationship between theory and practice will be explored through reading and discussion of theory, empirical research and clinical case material. Signature of instructor required.

Usually offered in even years.

Mr. Cunningham

**Psychology 172a.
Temporal
Patterning of
Behavior**

This course concerns the way animals control and perceive spatially directed posture and movements. Topics range from the definition of optical, mechanical and acoustic information about orientation to how body orientation and motion with respect to these referents may be represented.

Usually offered in odd years.

Mr. DiZio

**Psychology 173a.
Psycholinguistics**

See Linguistics 173a for description.

Usually offered in even years.

Mr. Zurif

**Psychology 175b.
Seminar in Sensory
Perception**

This course will survey the sensory systems, beginning with a detailed study of well-established anatomy and physiology and continuing with a discussion of more recent findings in each area. The readings are designed to link neurophysiological evidence with psychophysical observations.

Usually offered every year.

Ms. Halpern

**Psychology 182b.
Culture and
Cognition**

See Anthropology 161b for description.

Usually offered every year.

Mr. Murray

Psychology 183b. Psychological Anthropology	See Anthropology 155b for description. Usually offered every fourth year. Mr. Saler	Psychology 205a. Seminar in Perceptual Development	A detailed analysis of recent experimental and theoretical literature on perceptual development. Usually offered in odd years. Mr. Hershenson
Psychology 184b. Philosophy of Psychology	See Philosophy 141b for description. Usually offered in even years. Mr. Samet	Psychology 206b. Computer Methods in Psychological Experimentation	Usually offered in even years. Mr. Todd
Psychology 193b. Tests and Measurements	This course covers test theory, types of measurement, the theory and measurements of reliability and validity, and test construction. The measurements of intelligence, achievement and personality are also considered. Usually offered in odd years. Mr. Knight	Psychology 207a. Seminar in Perception	This course examines the various aspects of visual information by which objects and events in three-dimensional space are perceived by human observers. Current research in both psychology and artificial intelligence will be considered. Usually offered in even years. Mr. Todd
Psychology 194b. Language and Mind	See Linguistics 194b for description. Usually offered in odd years. Mr. Zurif	Psychology 208a. Seminar in Cognitive Sciences	This year the seminar will discuss philosophical foundations of cognitive science: what constitutes a mental representation and how representation is involved in processing and brain function. Usually offered every year. Mr. Prince
Psychology 195a. Introduction to Psychological Theory	A survey of psychological theories including associationism, structuralism, functionalism, gestalt, behaviorism, psychoanalysis and their modern derivatives. Emphasis is on the nature of explanation. Usually offered every year. Mr. Hershenson	Psychology 209a. Advanced Seminar in Measurement Theory and Mathematical Modeling	Usually offered every third year. Staff
Psychology 197a. Language Acquisition and Development	See Linguistics 197a for description. Usually offered in even years. Ms. Grimshaw	Psychology 210a. Advanced Psychological Statistics I	Probability and inferential statistics for experimental research. Rules of probability, random variables and their distributions, statistical inference, tests of hypotheses and confidence intervals for population means, principles of experimental design, the analysis of variance. Introduction to computer analysis using the SPSS and BMDP statistical packages. Usually offered every year. Mr. Berbaum
Psychology 199a. Neuropsychology	This course is designed as an introduction to the field of neuropsychology. Topics will include the concepts of cerebral dominance and localization of function within the human brain, with special reference to language and related mental function. The aphasic syndromes will receive special attention, including their symptoms, progress, brain localization and concomitant cognitive disorders. Usually offered every year. Mr. Zurif	Psychology 210b. Advanced Psychological Statistics II	Statistical procedures for quasi- and non-experimental research. Correlation and regression, multiple regression, partial and multiple correlation, the analysis of contingency tables (cross-tabulations), nonparametric statistics. Computer data analysis using SPSS and BMDP. Usually offered every year. Mr. Berbaum
Psychology 202b. Seminar in Human Spatial Orientation	Usually offered in even years. Mr. Lackner	Psychology 211b. Seminar in Binocular Vision	Usually offered in odd years. Ms. Halpern
Psychology 203b. Seminar in the Neuropsychology of Language	This seminar will consider theories of brain-language relations. Usually offered in odd years. Mr. Zurif		

Psychology 213b. Cognition and the Brain	Usually offered every fourth year. Staff	230a and b. Research in Animal Behavior	Mr. Wodinsky
Psychology 216b. Research Seminar in Cognitive Sciences	In this seminar, students will present and discuss their ongoing research. Usually offered every year. Staff	231a and b. Research in Social Psychology 232a and b. Research in Developmental Psychopathology	Ms. Amabile Mr. Cunningham
Psychology 218b. Seminar in Social Cognition	This course deals with research in impression formation and causal attribution. Causal attributions for one's own behavior as well as for other people's behavior will be treated. Determinants of impression formation and causal attribution to be covered include social information, attention, motives and individual differences. Usually offered every third year. Staff	233a and b. Research in Syntax and Language Learnability 234a and b. Research in Life-Span Development; Adult Personality 235a and b. Research in Layout and Motion Perception	Ms. Grimshaw Ms. Lachman Mr. Todd
Psychology 220-240a and b. Courses in Research	Offered every year.	236a and b. Research in Developmental Psychology	Mr. Watson
220a and b. Research in Spatial Orientation	Mr. Lackner	237a and b. Research in Group Problem Solving and Decision Making	Mr. Berbaum
221a and b. Research in Semantics and Conceptual Structure	Mr. Jackendoff	238a and b. Research in Metric and Phonological Theory	Mr. Prince
222a and b. Research in Human Spatial Orientation	Mr. Morant	239a and b. Research in Autosegmental and Metrical Phonology	Ms. Yip
224a and b. Research in Speech Perception and Cognitive Processes	Mr. Wingfield	240a and b. Research in Sensory Physiology: Visual and Auditory Psychophysics	Ms. Halpern
225a and b. Research in Visual Space Perception	Mr. Hershenson		
226a and b. Research in Cognitive Processes and Psychopathology	Mr. Knight		
227a and b. Research in Neurolinguistics and Psycholinguistics	Mr. Zurif		
228a and b. Research in Syntax and Comparative Germanic	Ms. Maling		
229a and b. Research in Person Perception	Ms. Zebrowitz		

Psychology 250-270a and b. Advanced Research Project	Offered every year.		Psychology 304a. Research Methodology for Developmental and Social Psychology	This course provides a comprehensive review of empirical methodology in social and developmental psychology including: research ethics, hypothesis testing, experimental and quasi-experimental design, naturalistic observation, survey and evaluation research, clinical and applied research, data analysis, report writing and peer review procedures.
	250a and b. Mr. Lackner	261a and b. Ms. Amabile		
	251a and b. Mr. Morant	262a and b. Mr. Berbaum		
	252a and b. Mr. Rubin	263a and b. Mr. Cunningham		Usually offered in even years.
	253a and b. Mr. Wingfield	264a and b. Ms. Grimshaw		Ms. Amabile
	254a and b. Mr. Hershenson	265a and b. Ms. Lachman	Psychology 310b. Topics in Data Analysis for Social Scientists	Usually offered every third year. Mr. Berbaum
	255a and b. Mr. Knight	266a and b. Mr. Todd		
	256a and b. Ms. Zebrowitz	267a and b. Mr. Zurif	Psychology 315d. Faculty Research Seminar	This seminar is required of all first-year graduate students. Taught by all faculty members of the department, the course exposes students to faculty members' current research. Usually offered every year. Staff
	257a and b. Mr. Wodinsky	268a and b. Mr. Prince		
	258a and b. Mr. Watson	269a and b. Ms. Halpern		
Psychology 280-299a and b. Advanced Readings	Offered every year.		Psychology 316a. Social/Developmental Research Seminar	This course is required of all social/developmental graduate students who have not been admitted to candidacy. Usually offered every year. Ms. Zebrowitz
	280a and b. Mr. Lackner	290a and b. Ms. Maling		
	281a and b. Mr. Morant	291a and b. Ms. Amabile	Psychology 320a and b. Advanced Tutorial in Spatial Orientation	Usually offered every year. Mr. Lackner
	282a and b. Ms. Halpern	292a and b. Mr. Berbaum		
	283a and b. Mr. Wingfield	293a and b. Mr. Cunningham	Psychology 400-420d. Dissertation Research	400d. Mr. Lackner 401d. Mr. Jackendoff 402d. Mr. Morant 404d. Mr. Wingfield 405d. Mr. Hershenson 406d. Mr. Knight 407d. Mr. Watson 408d. Ms. Maling 409d. Ms. Zebrowitz 410d. Mr. Wodinsky
	284a and b. Mr. Hershenson	294a and b. Ms. Grimshaw		411d. Ms. Amabile 412d. Mr. Cunningham 413d. Ms. Grimshaw 414d. Ms. Lachman 415d. Mr. Todd 416d. Mr. Berbaum 417d. Mr. Zurif 418d. Mr. Prince 419d. Ms. Halpern 420d. Ms. Yip
	285a and b. Mr. Knight	295a and b. Ms. Lachman		
	286a and b. Ms. Zebrowitz	296a and b. Mr. Todd		
	287a and b. Mr. Wodinsky	297a and b. Mr. Zurif	Courses and Seminars for Graduate Students and Advanced Undergraduates	
	288a and b. Mr. Watson	298a and b. Mr. Prince	Linguistics 100a. Introduction to Linguistics	A general introduction to linguistic theory and the principles of linguistic analysis. The central topic of the course is what speakers know about their language: syntax, semantics and phonetics and phonology. In each area, students will construct detailed analyses of data from English and from other languages. Additional topics such as historical linguistics and the psychological implications of linguistic theory will be covered as time allows. Usually offered every semester. Fall Term: Mr. Jackendoff Spring Term: Ms. Yip
Psychology 300a. Proseminar in Social and Developmental	This course offers an in-depth review of primary sources in several major topic areas of social and developmental psychology. Usually offered in odd years. Mr. Watson	299a and b. Ms. Yip		

Linguistics 110a. Phonological Theory	<p>This course is an introduction to generative phonology, which is a theory of natural language sound systems. It begins with a review of articulatory phonetics, followed by distinctive feature theory and the concept of a "natural class." The central section covers morphology and the nature of morphophonetics and universal properties of the rules that relate morphophonemic and phonetic representations. The course ends with discussion of a special topic such as syllable structure or word formation.</p> <p>Usually offered every year.</p> <p>Mr. Prince</p>	Linguistics 150b. Introduction to Cognitive Science <p>This course will consider how the mind is structured to represent and process information of relevance to language and other cognitive domains.</p> <p>Usually offered every year.</p> <p>Mr. Jackendoff</p>
Linguistics 112b. Introduction to Historical Linguistics	<p>Principles and methods of language change and linguistic reconstruction. Emphasis on the history and development of the Indo-European language family. Readings from earlier scholars (Meillet, Jakobson, Vendry�s, etc.) as well as discussion of present-day issues in historical and comparative linguistics. Practical exercises in comparative method and internal reconstruction.</p> <p>Usually offered in odd years.</p> <p>Staff</p>	Linguistics 153a. Consciousness <p>See Psychology 153a for description.</p> <p>Usually offered every third year.</p> <p>Staff</p>
Linguistics 120b. Syntactic Theory	<p>This course extends the syntactic framework developed in the introductory course through the study of such problems as the complement system and constraints on transformations, with emphasis on their relevance to universal grammar.</p> <p>Usually offered every year.</p> <p>Ms. Grimshaw</p>	Linguistics 173a. Psycholinguistics <p>An introduction to modern psycholinguistics with an emphasis on language comprehension and production. Questions concerning species-specificity and the neurological organization of language are included for consideration.</p> <p>Usually offered in even years.</p> <p>Mr. Zurif</p>
Linguistics 122b. Investigations in an Unfamiliar Language	<p>Using a native speaker of an unfamiliar language (such as Turkish or Amharic) as a source of data, the class will investigate the structure of the language and compare it with the structure of English and other familiar languages. May be repeated for credit.</p> <p>Usually offered in even years.</p> <p>Mr. Prince</p>	Linguistics 194b. Language and Mind <p>An examination of the notion of innate ability to learn human language, considered in relation to issues of brain localization, species-specificity and developmental constraints.</p> <p>Usually offered in odd years.</p> <p>Mr. Zurif</p>
Linguistics 130a. Semantics	<p>This course explores the semantic structure of language in terms of current linguistic theory. Topics to be covered include the nature of semantic representation, functional structure, presupposition and reference.</p> <p>Usually offered in odd years.</p> <p>Mr. Jackendoff</p>	Linguistics 197a. Language Acquisition and Development <p>When a child knows a language he or she has successfully constructed a grammar of it; in the course of constructing the grammar the child must form hypotheses about the language and test them against the available data. The central problem of language acquisition is to explain what makes this formidable task possible. In the course, we will study and evaluate theories of language acquisition in this light, basing our conclusions on recent research in the development of syntax, semantics and phonology. The overall goal is to arrive at a coherent picture of the kinds of hypotheses children make, and the kinds of strategies they use as they progress toward mastery over their language.</p> <p>Usually offered in even years.</p> <p>Ms. Grimshaw</p>
Linguistics 135a. Linguistics and the Romance Languages	<p>Usually offered every fourth year.</p> <p>Ms. Grimshaw</p>	Linguistics 199a and b. Directed Research <p>Usually offered every year.</p> <p>Staff</p>
Linguistics 140a. History of the English Language	<p>Usually offered in even years.</p> <p>Ms. Maling</p>	

Seminars for Graduate Students
**Linguistics 215b.
Phonology**

Recent developments in phonological theory, with special emphasis on prosodic phonology including autosegmental theories of tone, nonlinear morphology and phonology, and metrical theories of stress. Required of first-year graduate students in linguistics and cognitive science.

Usually offered every year.

Ms. Yip

**Linguistics 217b.
Topics in Phonology**

Topics drawn from recent research in metrical, autosegmental and lexical phonology. Requirements include a class presentation and a research paper. Material covered will vary from year to year.

Usually offered every year.

Mr. Prince

**Linguistics 225b.
Syntax**

Recent developments in syntax, including such topics as constraints on rules, trace theory, government and binding, and lexical-functional grammar. Required of first-year graduate students in linguistics and cognitive science.

Usually offered every year.

Ms. Grimshaw

**Linguistics 226a.
Topics in Syntax**

Current issues in the theory of syntax, focusing on research in government binding theory and lexical functional grammar. Topics covered will vary from year to year, but will generally include: anaphora, extraction, bounding conditions and lexical representation.

Usually offered every year.

Ms. Maling

**Linguistics 236a.
Topics in Semantics**

Current issues in the theory of conceptual structure and its relation to syntax.

Usually offered every third year.

Mr. Jackendoff

**Linguistics 240a.
Field Methods**

Working with a native speaker language consultant, the students in this course will investigate the phonology and syntax of a language unfamiliar to them. The students will gain expertise in linguistic analysis through exploring the hypotheses of current theory in a new language context.

Usually offered in even years.

Mr. Prince

Russian

See Joint Program of Literary Studies

Sociology

Objectives

The graduate program in sociology is primarily a doctoral program and is designed for students who intend to devote themselves to teaching and research in sociology. The student may, by satisfying certain requirements, receive the M.A. degree. The general objective is to educate students in the major areas of sociology with specialization in several of them.

Admission

The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to the sociology department.

In addition, all prospective students are required to submit written material (papers, etc.) representative of their best work, which need not be, however, of a sociological nature.

Faculty

Professor
George W. Ross,
Chair:
Political sociology.
Social theory.

Professor
Irving K. Zola:
Sociology of health
and illness. Disability
studies. Deviance.
Field studies.

Associate Professor
Peter Conrad:
Sociology of health
and illness. Deviance.
Field methods.

Associate Professor
Charles S. Fisher:
Technology and
environment. Social
psychology of
consciousness.

Associate Professor
Shulamit Reinharz:
Qualitative
methodology. Social
gerontology. Feminist
research. Social
psychology. Group
dynamics.

Assistant Professor
**M. Jacqueline
Alexander:**
Sociology of health.
Political sociology.
Third World
development.
Sociology of women.

Professor
Egon Bittner:
Sociology of law.
Social control.

Associate Professor
Gordon A. Fellman:
Marx and Freud.
Social stratification.
Peace studies.

Associate Professor
Gila J. Hayim:
Sociological theory.
Critical theory.
Phenomenology and
existential sociology.

Associate Professor
Carmen Sirianni:
Work. Organizations.
Theory. Time.
Comparative
sociology.

Assistant Professor
Michael W. Macy:
Quantitative methods.
Political sociology.
Class and
stratification.

Professor
Maurice R. Stein:
Communities.
Culture. Counseling.
Consciousness.

Degree Requirements

Doctor of Philosophy

Program of Study.

Students entering the Ph.D. program in sociology are expected to undertake a two-year program of course work, as a part of which they are obliged to take the departmental Pro-Seminar (Sociology 290a). The initial program of studies will be arranged in consultation with the graduate student's advisor. Consideration will be given to graduate work done elsewhere but formal transfer credit will be assigned only after the successful completion of the first year of study.

Qualifying
Examinations.

During a student's residency until the time of his or her formal admission to candidacy, the specific planning, evaluation and accreditation of his or her entire course of study will be in the hands of each student's Guidance-Accreditation Committee, comprised of three faculty members. Along with the student, this committee will lay out a general course of study designed to meet the interests and needs of the student. Upon completion of this course of study, the student will take an oral qualifying examination covering both general sociology and the areas of the student's special interests. It is assumed that students will fulfill their accreditation before the end of their third year of residence.

Requirements for the
M.A.

An M.A. may be granted after the successful completion of three semesters of course work and submission of two substantial research papers to be approved by the department.

Admission to
Candidacy.

A student shall be eligible for admission to candidacy for the Ph.D. upon fulfillment of the residence requirements, passing the departmental qualifying examination and successful defense of a dissertation proposal. The work on the doctoral dissertation will be supervised by a Dissertation Committee.

Residence Requirements.

The minimum residence for the degree of Doctor of Philosophy is two years. It is expected that the Ph.D. will be earned within five years.

Dissertation and the
Final Oral
Examination.

The Ph.D. dissertation may be accepted by the department upon the recommendation of the Dissertation Committee. To be granted the degree, the student is required to defend the dissertation in a public Final Oral Examination.

Language
Requirements.

There is no foreign language requirement for the Ph.D. degree.

Courses of Instruction

<p>Sociology 102a. Social Psychiatry</p>	<p>Training in peer counseling is offered through classes, supervised sessions with other students and community work. Theory, social contexts and practice of re-evaluation counseling is stressed. Other social psychiatric approaches are also covered.</p> <p>Usually offered every year.</p> <p>Mr. Stein</p>	<p>Sociology 108b. Critiques of Contemporary Society</p>	<p>Analysis of major approaches in contemporary sociology and critical theory and their implications for modern man. The emphasis is on the methods and functions of social criticism. Theorists like Comte, Weber, Ellul, Marcuse, Rieff, Williams and others will be considered.</p> <p>Usually offered every year.</p> <p>Ms. Hayim</p>
<p>Sociology 103a. The Sociology of Mental Illness and Health</p>	<p>This course will concern itself with various sociological and psychological perspectives on the causes, nature of, and treatment for mental illness. We will also focus on the ways in which mental health is conceptualized as an internal state and an interpersonal process, and on the suggested means through which it might be achieved.</p> <p>Usually offered every third year.</p> <p>Mr. Conrad</p>	<p>Sociology 109b. Black Intellectuals and the Crisis of the Twentieth Century</p>	<p>Considers major political writers and leaders in the United States, Africa and the Caribbean by passing in review the 20th century as seen from the standpoint of their work. Includes Dubois, Garvey, Nkruman, King, Rodney and others.</p> <p>Usually offered every year.</p> <p>Staff</p>
<p>Sociology 104a. Sociology of Education</p>	<p>A study of educational institutions that examines pedagogy, educational structures and ideologies as they relate to social inequality in the broader society. This course examines the role of the institution of education as a force for social change versus the idea that education's function is to reinforce prevailing social conditions.</p> <p>Usually offered in even years.</p> <p>Staff</p>	<p>Sociology 110b. Sociology of Knowledge</p>	<p>History and historical interpretation of the sociology of knowledge with particular emphasis on German and recent American literature.</p> <p>Usually offered in odd years.</p> <p>Mr. Wolff</p>
<p>Sociology 105a. Feminist Critique of Contemporary Social Institutions I</p>	<p>Study of the various issues addressed in feminist activism (i.e., family, child care, reproductive rights, employment discrimination, social construction of sexuality and lesbian rights, sexual violence) as they form a critique of social and political institutions, analysis of the structural, ideological and psychological dimensions of sex oppression.</p> <p>Usually offered every year.</p> <p>Staff</p>	<p>Sociology 111a. Political Sociology</p>	<p>This course will examine the relationship between society and politics, social processes and political change. A critical analysis of the major concepts and alternative theories will be presented and their relevance to advanced Western societies (particularly the United States) will be discussed.</p> <p>Usually offered every fourth year.</p> <p>Staff</p>
<p>Sociology 107a. Issues in Social Psychology</p>	<p>This course covers the origins of social psychological theory as the study of interpersonal behavior. It contrasts sociological and psychological social psychology and examines current contributions to the discipline's content, methods and definition.</p> <p>Usually offered every year.</p> <p>Ms. Reinharz</p>	<p>Sociology 112b. Social Class, Freedom and Equality</p>	<p>The concept of social class; its role in determining life changes, lifestyles, income, occupation and power; theories of class and inequality; selected social psychological aspects of social class and inequality; American class structure and dynamics; American social class and imperialism.</p> <p>Usually offered every year.</p> <p>Mr. Fellman</p>
		<p>Sociology 113b. Women and Work</p>	<p>We will explore the nature of women's work since 1945 in the West. We will look at what opportunities exist for women in the work world; how class, race and gender shape these opportunities; how women manage family and work lives; and what structural changes would create a better balance between public and private worlds for women and work.</p> <p>Usually offered every fourth year.</p> <p>Staff</p>

Sociology 114b. Society and Economy: Sociological Theories of Advanced Capitalism	<p>A review of modern social theories about the production and reproduction of advanced capitalistic economies and social orders, focusing on the specification of and relationships between major social groups, productive organizations and the market in dynamic perspective. Organized around the social history of the contemporary period, the course will discuss liberal-Keynesian, elite, social democratic, Marxist and Neo-Marxist, critical and neo-liberal theories.</p> <p>Usually offered every year.</p> <p>Mr. Ross</p>	Sociology 118b. The Sociology of the American Jewish Community	<p>See NEJS 164b for description.</p> <p>Usually offered every year.</p> <p>Mr. Sklare</p>
Sociology 115a. Class Structure and Consciousness	<p>The course explores the importance of property, authority and knowledge in structuring socioeconomic inequality and shaping ideological alignments in contemporary society. What is class inequality, why does it exist and what are its psychological and political consequences? Has education supplanted property in status inheritance as well as attainment? Is complete meritocracy incompatible with class inequality or would it "perfect" it?</p> <p>Usually offered every year.</p> <p>Mr. Macy</p>	Sociology 119a. Militarism, the Arms Race and American Society	<p>The objective of the course is to increase comprehension of the consequences of militarism and the arms race for American society. Attention will be given to the post-World War II development of militarism and its relationship to American economic, political and social institutions including focus on issues of national security, nuclear proliferation and modern disarmament activity. An interdisciplinary course open to all students.</p> <p>Usually offered every year.</p> <p>Mr. Fellman</p>
Sociology 116b. Comparative Ethnic Relations	<p>The main purpose of this course is to explore and understand the origin and nature of racial and ethnic differences as they manifest themselves in different human societies. We will explore how theoreticians explain and account for that difference and how those who experience that difference define and use it as a basis to change the content of their daily lives. Our method of exploration will be comparative, historical and interdisciplinary in perspective.</p> <p>Usually offered every year.</p> <p>Ms. Alexander</p>	Sociology 120a. Sociology of Underdevelopment I	<p>This course will examine selected aspects of the phenomenon of underdevelopment, paying particular attention to economic, political and social factors internal to Third World societies. Although the course will be informed throughout by general theorizing about underdevelopment and will include theoretical readings, it will emphasize the local consequences of large-scale processes. Topics include migration, rural organization, education and urban growth. The course is designed with the undergraduate concentrator in one of the social sciences in mind.</p> <p>Usually offered in odd years.</p> <p>Staff</p>
Sociology 117a. Work and Society	<p>Work and its transformation in contemporary society. Blue, white and pink collar work; professional and nonprofessional occupations; gender, family and work; labor market structures; affirmative action and comparable worth; crisis of American unionism; the impact of new technologies; occupational health and safety; the service society; postindustrial workplaces; Quality of Work Life reforms and worker participation in the United States, Japan and Europe; worktime innovations (jobsharing, flexible options); informal economy; the future of work.</p> <p>Usually offered every year.</p> <p>Mr. Sirianni</p>	Sociology 120b. The Sociology of Underdevelopment II	<p>This course examines selected aspects of underdevelopment, paying particular attention to processes of change internal to Third World societies.</p> <p>Usually offered in even years.</p> <p>Ms. Alexander</p>
Sociology 118a. American Jewish Life and Institutions	<p>Usually offered every year.</p> <p>See NEJS 161a for description.</p> <p>Mr. Sklare</p>	Sociology 121b. Mass Media and Social Reality	<p>Through an examination of the history and development of contemporary media, including television, films, print media, etc., the course will explore the impact of mass media in everyday life. We will consider questions of audience, politics and ideology, aesthetics and the structure of the culture industry as it perpetuates and creates images of "social reality."</p> <p>Usually offered in even years.</p> <p>Mr. Zola</p>

<p>Sociology 123b. The Crisis of the Welfare State</p>	<p>Cross-national comparisons of the extensiveness and impact of the welfare state will be used to concretize and illuminate larger theoretical questions about the compatibility between the competitive logic of market economies and the universalistic, egalitarian principles of democratic politics. To what extent can democratic pressures alter market outcome? Has the welfare state finally gone "too far," paralyzing the "invisible hand"?</p> <p>Usually offered every year.</p> <p>Mr. Macy</p>	<p>Sociology 130a. The Family I</p> <p>This course presents a view of the family as a patriarchal institution and analyzes its relationship to other social institutions. Cross cultural analysis is employed to examine family forms, practice and ideas in terms of their impact on women. Critique of the family is approached through studying alternative life-styles and violence in the family.</p> <p>Usually offered every year.</p> <p>Staff</p>
<p>Sociology 124a. Women, Health and Social Structure: Comparative Perspectives</p>	<p>Usually offered every year.</p> <p>Ms. Alexander</p>	<p>Sociology 131b. Women's Biography and Society</p> <p>Through the biographies of women intellectuals, scientists, political leaders and "ordinary" women, we will study women's subjective experiences and interactions as they are imbedded in objective conditions of society. The relationship of private and public life will be examined over the life course from birth to death. Biography will also be considered as a method of sociological inquiry.</p> <p>Usually offered in odd years.</p> <p>Staff</p>
<p>Sociology 125b. Land and Peasant Struggles in Latin America/Caribbean</p>	<p>In this seminar we examine the relationship between the ownership, use and control of land and the ability of "Third World" governments to satisfy the food and agricultural needs of their populations. Emphasis is placed upon the history of land policies, the role of multinationals, the nature of rural class structures, the emergence of peasant movements and the alternative organizations of cooperative agriculture. Case studies are drawn from Latin America and the Caribbean.</p> <p>Usually offered every year.</p> <p>Ms. Alexander</p>	<p>Sociology 132a. City Limits: An Introduction to Urban Sociology</p> <p>This class will examine the tensions arising from the interplay of the marketplace and social forces in modern urban settings. Special attention will focus on the opportunities and constraints in American cities.</p> <p>Usually offered in even years.</p> <p>Mr. Macy</p>
<p>Sociology 126a. Sociology of Deviance</p>	<p>An investigation of the sociological perspectives of deviance, focusing particular attention on definitional sociopolitical and interactional aspects — and social response. Includes a review of theory and current research and discussions of various forms of noncriminological deviance and social control.</p> <p>Usually offered every year.</p> <p>Mr. Conrad</p>	<p>Sociology 133b. Social Change in Modern Africa</p> <p>Usually offered every year.</p> <p>Staff</p>
<p>Sociology 128b. Sociology of Religion: Sects, Cults and Societies</p>	<p>Uses case studies to examine religious innovation in comparative perspective and in terms of its impact upon established religion, economic life, political organization and individual personality.</p> <p>Usually offered in even years.</p> <p>Staff</p>	<p>Sociology 134a. Women and Intellectual Work</p> <p>This research seminar investigates the history of American women social scientists within the context of intellectual history, social structure and gender relations. We will analyze the scholarly work of different generations of women thinkers, including their reflective writing. We will also seek out women whose work has been ignored or trivialized, and examine the reports of the American Sociological Association on the status of women. From this course students should gain an appreciation both of the history of women's intellectual effort as sociologists and the contrast and continuities with current work.</p> <p>Usually offered in odd years.</p> <p>Ms. Reinharz</p>
<p>Sociology 129a. Politics and Inequality</p>	<p>This course uses a limited number of readings to introduce a series of related controversies about the political repercussions of social inequality. Students then investigate these issues using primary materials and report back their findings. The idea is that sociological knowledge can be acquired not only from books and lectures but also from actually "doing sociology." Prior methodological training is not assumed.</p> <p>Usually offered every year.</p> <p>Mr. Macy</p>	<p>Sociology 141a. Marx and Freud</p> <p>The course stresses Marxian and Freudian treatment of human nature, human potential, social stability, conflict, change, consciousness, social class and the relationship between family and social process. Topics of contemporary importance are reviewed in the light of both traditions. Attempts to combine the two approaches are examined.</p> <p>Usually offered in even years.</p> <p>Mr. Fellman</p>

Sociology 144b. Sociopsychological Dimensions of the Arms Race	<p>In this course we will read the literature in, discuss and critically evaluate, the sociopsychological theories, speculations, interpretations and conceptualizations that explain and try to understand the arms race.</p> <p>Usually offered in odd years.</p> <p>Mr. Schwartz</p>	Sociology 161a. Society, State and Power	<p>This course will examine the ways in which power is exercised in different political regimes and social systems. The major focus of the course will be present-day advanced industrial societies, with particular consideration of the United States. Central topics will include the role of the state in society, the social forces that shape public policy, the control of social conflict. Contrasts will be drawn with Soviet-type societies.</p> <p>Usually offered every year.</p> <p>Mr. Ross</p>
Sociology 147a. Sociology of Organizations	<p>This course will introduce students to the study of organizations primarily through case studies of contemporary organizations in a variety of settings: e.g., street-level bureaucracies (welfare, police), federal bureaucracies (Defense Department, OSHA), high-risk technology systems (nuclear power, nuclear weapons), private corporations (industrial and nonindustrial settings), universities and democratic collectives. A critical approach to organization theory — focusing on power, gender, opportunity, participation and organizational change — will be central throughout.</p> <p>Usually offered every year.</p> <p>Mr. Sirianni</p>	Sociology 164a. Existential Sociology	<p>This course is an introduction to existential thought and its relation to the discipline of sociology. Existential evaluation of selected theories on human nature and interaction, individual freedom and social ethics, the genesis and fate of the modern human group, types of authority, etc. Readings include works by Sartre, Durkheim, Goffman, Nietzsche, Kierkegaard, Mead and Merleau-Ponty.</p> <p>Usually offered every year.</p> <p>Ms. Hayim</p>
Sociology 148a. Social Psychology of Consciousness I	<p>Critical and practical examination of the concept of the individual both in itself and in social context. Social experiences are reexamined in terms of the qualities of mind that engender them. Traditional practices of meditation are reviewed in the forms of metaphor and parable in which they are presented.</p> <p>Usually offered every year.</p> <p>Messrs. Fisher and Stein</p>	Sociology 165a. Sociology of Birth and Death I	<p>This course will explore the ways in which different societies shape the human experience of birth and death. It will focus on recent changes in the social settings and meanings of birth and death in advanced industrial societies. Topics to be covered include Eastern attitudes toward birth and death, the Holocaust and nuclear war, the social implications of medical technologies and the home birth and hospice movements.</p> <p>Usually offered every year.</p> <p>Mr. Stein</p>
Sociology 151b. Fieldwork in Social Settings: Environmental Research	<p>The purpose of this course is to provide students with an opportunity to do first hand research in a setting of their choice. This could be in terms of a specific research project or an internship. Students are expected to find their own settings, subject to approval by instructor. Research techniques, including participant-observation, interviewing and document analysis, will be presented, along with appropriate methods for data analysis. Each student will prepare a sociological report on fieldwork experience.</p> <p>Usually offered every year.</p> <p>Mr. Conrad</p>	Sociology 165b. Sociology of Birth and Death II	<p>A continuation of Sociology 165a.</p> <p>Usually offered every year.</p> <p>Mr. Stein</p>
Sociology 159a. Politics and Society in Contemporary France	<p>This course will focus on the political and social history of postwar France. The format of the course will be lecture-discussion, to be organized around outstanding and most representative films that cover the main events of postwar France.</p> <p>Usually offered every year.</p> <p>Messrs. Macridis and Ross</p>	Sociology 170b. Industrial Sociology	<p>An examination of modern industrial production and its implications for the social order. Stress will be placed on the nature of the industrial labor process, the internal organization of industrial institutions (the industrial relations system, unionization, management strategies and practices, bureaucratic and white collar work), and the relationships of industry with the state and the international system.</p> <p>Usually offered in odd years.</p> <p>Mr. Ross</p>

Sociology 171a. Black and Third World Women	<p>This course will examine the position of women of color within the context of certain political, economic, social and cultural transformations occurring in the Third World and the United States. Particular emphasis will be placed on women in the Caribbean and Latin America in order to gain a better understanding of both the similarities and peculiarities of their experiences compared to their North American counterparts. We will allow women of color to speak for themselves (through literature, films, etc.) at the same time that we analyze these more global transformations.</p> <p>Usually offered every year.</p> <p>Ms. Alexander</p>	Sociology 177b. Aging in Society	<p>This course explores the social aspects of aging and old age in our society. We examine the definition and treatment of age in various societies with an eye for understanding the contemporary Western response to age. We will explore the experience of aging in different settings in our society, and the survival strategies of old age. Fieldwork projects will be encouraged.</p> <p>Usually offered every year.</p> <p>Ms. Reinharz</p>
Sociology 173b. Contemporary Social Problems	<p>We will deal with a selected group of social problems among which will be: a) the social deterioration of the cities, b) the onslaught of information and misinformation, c) the troubles of consumerism, d) the burdens of racism and poverty, e) old age and social isolation. The aim of this course is to enable and encourage students to approach existing and proposed institutional arrangements critically.</p> <p>Usually offered every year.</p> <p>Mr. Bittner</p>	Sociology 178a. Sociology of the Professions	<p>An introduction to the professions in American society, from law and medicine to the public service, academic and business professions. Topics will include: the structure of careers and professional organizations, the schooling process, personal and family stress, bureaucratic work, relation to clients and government, alternative forms of professional work.</p> <p>Usually offered in odd years.</p> <p>Mr. Bittner</p>
Sociology 174b. Technology and Environment	<p>Nature and human productive activities are looked at in terms of the ways they affect each other. Transformations of the landscape, the evolution of industrial technology, biological change, agriculture and different kinds of environmental impact will be discussed. Farms, factories, forests, wilderness and cities are examined. In 1989-90 the focus will be on food systems.</p> <p>Usually offered every year.</p> <p>Mr. Fisher</p>	Sociology 181a. Quantitative Methods of Social Inquiry	<p>Sociology is possible because social life is structured and not random. Sociology is needed because the structures are often concealed. This course will introduce students to a variety of simple modeling techniques that may be useful for detecting such structured relationships. As such, it is not a statistics course (e.g., Math 36b) but a course on how to use quantitative tools to think sociologically, to facilitate empirically grounded social inquiry. Although the methods are quantitative, the emphasis is not on their mathematical derivation but on conceptual understanding and hands-on (user-friendly) application. No statistical background is presumed.</p> <p>Usually offered every year.</p> <p>Mr. Macy</p>
Sociology 176b. Issues in Third World Development	<p>This course will attempt to understand the nature of underdevelopment in the Third World by focusing on such issues as traditional culture, population increase and European colonialism. We will pay particular attention to the economic, political and cultural impact of the West and its implications for development in several Third World countries. Alternative theories and strategies of development will also be considered.</p> <p>Usually offered every year.</p> <p>Ms. Alexander</p>	Sociology 182b. World Population	<p>This course focuses on the changing size and composition of the world's population in modern times. This includes analysis of the causes and consequences of these changes by considering birth, death and migration in relation to the family, socioeconomic development, politics and public policy, the status of women, education and cultural institutions. The current population trends in the United States are compared with trends in other industrialized societies on the one hand, and with the situation in less economically developed countries on the other. This course will be conducted in a combined lecture-discussion format.</p> <p>Usually offered in odd years.</p> <p>Staff</p>

Sociology 188b. Sociology of Law	<p>The legal order considered in a framework of cross-cultural and historical comparison. The role of the instruments of the law and of the administration of justice in contemporary society.</p> <p>Usually offered every year.</p> <p>Mr. Bittner</p>	Sociology 196b. Seminar: Writing and the Social Sciences	<p>Examines the range of writing in the social sciences, both "popular" and "scholarly" including columns and life studies. Students write and exchange feedback on short pieces, with a view toward preparing work for publication. Frequent visits by social scientists, writers and editors.</p> <p>Usually offered in odd years.</p> <p>Mr. Zola</p>
Sociology 189b. Introduction to the History of Legal Thought	<p>A review of the intellectual development of Western conceptions of legality and of legal practice considered against the background of social change. Materials will be drawn from the history of Europe and the United States, from the late Middle Ages to the modern era.</p> <p>Usually offered every year.</p> <p>Mr. Bittner</p>	Sociology 200a. Classical Sociological Theory	<p>Critical readings of the sociologies of Marx, Weber and Durkheim.</p> <p>Usually offered every year.</p> <p>Mr. Bittner</p>
Sociology 190b. On the Caring of the Medical Care System	<p>An analysis of the structural arrangements of medical practice and of medical settings. The focus is on the societal and professional response to illness. Major topics include: emergence of the medical profession, social and economic organization of the medical sector, medical caregiving institutions, practitioner-patient interaction, comparative medical care systems and the medicalization of society.</p> <p>Usually offered every year.</p> <p>Mr. Conrad</p>	Sociology 200b. Contemporary Social Thought	<p>Examination of American and European social thought; system and conflict theory, symbolic interactionism, ethnomethodology and phenomenological sociology and critical theory.</p> <p>Usually offered in odd years.</p> <p>Ms. Hayim</p>
Sociology 191a. Health, Community, and Society	<p>An exploration into interrelationships of society and its institutions and the existence and experience of health and illness. Major topics include: social production of disease, social meaning of illness, community response to illness and the experience of illness.</p> <p>Usually offered every year.</p> <p>Mr. Conrad</p>	Sociology 202a. Quantitative Research Methods	<p>This research seminar is designed to involve students in survey and archival data collection and analysis. Technical training will be coupled with explorations of methodological issues centering on the integration of theory and empirical research. Through hands-on assignments, students will learn to use a variety of modeling techniques and associated computer software. Although the methods are quantitative, the emphasis is not on their mathematical derivation but on conceptual understanding and hands-on (user friendly) application. No statistical background is presumed.</p> <p>Usually offered in odd years.</p> <p>Mr. Macy</p>
Sociology 192b. Sociology of Disability	<p>In the latter half of the 20th century, disability has emerged as an important social-political-economic-medical issue. It has, however, a distinct history characterized by one writer as a shift from "good will to civil rights." We will trace that history and the way people with disability are seen and unseen, and see themselves. Particular attention will be placed in understanding the self-care/self-help movement. Students will be expected to carry out a fieldwork project.</p> <p>Usually offered every year.</p> <p>Mr. Zola</p>	Sociology 203b. Field Methods	<p>The methodology of sociological field research in the qualitative research tradition. Readings will include theoretical statements as well as experiential accounts of researchers in the field. The course will include specific methods and procedures of data collection (participant observation, interviewing, collaborative research, systematic observation, oral history) and data analysis.</p> <p>Usually offered every year.</p> <p>Ms. Reinharz</p>
		Sociology 204a. Sociology and History	<p>Usually offered every third year.</p> <p>Staff</p>

Sociology 205a. Sexual Stratification: Historical and Comparative Perspectives	Usually offered every third year. Staff	Sociology 212a. Topics on Women and Development	We examine the relationship between the "development" process and the continued subordination of women in "Third World" countries. The "development" rhetoric that evolved within major international agencies (U.S.A.I.D., World Bank) will be contrasted with the ways in which women have actively structured their lives. Emphasis is placed on women's position in production and reproduction and relationships among the domestic unit, class structure and the larger political economy. Our approach is multidisciplinary and cross-cultural with a focus on Asia, Africa, Latin America/Caribbean. Usually offered in odd years. Ms. Alexander
Sociology 206b. The Family	This seminar will study various perspectives in family sociology: structural functionalism, sociobiology, interpretative-interaction, Marxist, feminist. We will examine and critique cross-cultural family research and contemporary approaches to black and other minority group family life. Family dynamics, including decision making, domestic labor, reproduction, sexuality and violence, will be studied. Usually offered every third year. Staff	Sociology 214a. Topics in Social Psychology: Freud and the Freudian Tradition	Usually offered every third year. Staff
Sociology 207a. Feminist Theory	A comprehensive study of various approaches to feminist theory through an examination of ideas and writings that frame the major theoretical questions in feminism today: consciousness and ideology, essentialism and materialism, relation of theory to practice, the intersections of race and class with sex oppression. Usually offered in even years. Staff	Sociology 215a. The Sociology of State Action	An examination of theories and concepts that have been advanced to explain the dynamics of state action in different social and economic contexts, notably in such advanced capitalistic societies as the United States and in Soviet-type societies, notably in the USSR. Recent discussions of the degree to which the state acts independently of social and economic forces in society will be considered, as will concrete cases of state action. Usually offered every third year. Staff
Sociology 208a. Seminar in the Sociology of Organization	This course examines classical and contemporary organizational theory primarily through case studies of contemporary organizations in a variety of settings: private corporations, unions, street-level bureaucracies, federal agencies, high-risk technology systems, universities, democratic collectives, social change organizations. Critical analysis of issues of power, gender, opportunity; participation will be a focus throughout. Usually offered in odd years. Mr. Sirianni	Sociology 216b. The Frankfurt School and Critical Theory	The course analyzes the foundations of critical theory and evaluates its reformation of the concepts and prospects of social change. Readings include Hegel, Gramsci, Lukacs, Marcuse, Habermas, Offe and Sartre. Usually offered in even years. Ms. Hayim
Sociology 209b. Class and Politics	Usually offered every fourth year. Staff	Sociology 217a. Problems and Issues in the Sociology of Health and Illness	The aim of this course is to offer a socio-cultural-historical-political perspective on the study of problems of health and illness. We will accomplish this by examining some of the basic assumptions underlying the way we conceive of and study issues in health care. The written assignments include a health diary, a text analysis and a book review. Usually offered every third year. Mr. Zola
Sociology 210a. The Sociology of Development and Underdevelopment	Usually offered every third year. Staff		
Sociology 211a. Research on Women and Society	Usually offered every third year. Staff		

Sociology 218a. Advanced Topics in Social Theory and Methods: Surrender and Catch	<p>"Surrender" is the most immediate contact with a topic being studied or a situation or individual being encountered; "catch" is its outcome. In this seminar we will explore the relation between the idea of surrender-and-catch and the crisis of mankind from which it springs and trace affinities with other recent currents in the social sciences and philosophy.</p> <p>Usually offered in even years.</p> <p>Mr. Wolff</p>	Sociology 222b. Society and Health Promotion	<p>This graduate seminar will examine rise and development of prevention and health promotion in American society. We will examine various aspects of the health promotion phenomenon: the emergence of the risk factors paradigm, the wellness movement, government policy (e.g., Surgeon General's Report), research on community and individual intervention and worksite health promotion. The emphasis will be on a sociological understanding of health promotion, especially in terms of its emergence, various manifestations and social consequences.</p> <p>Usually offered in odd years.</p> <p>Mr. Conrad</p>
Sociology 218b. Advanced Topics in Social Theory and Methods	<p>Usually offered every third year.</p> <p>Staff</p>		
Sociology 219a. Social Systems and Political Forms	<p>Usually offered every third year.</p> <p>Staff</p>	Sociology 223a. Sociology of Work	<p>The organization of work in contemporary society, with an emphasis on the United States and other advanced industrial or post industrial societies (West Europe and Japan). Some limited discussion of work in less developed societies. Topics will include: forms of control, the deskilling debate, the impact of new technologies, gender and race, labor market segmentation, comparable worth, families and work, service work, the psychodynamics of work in postindustrial society, informal economy, new forms of flexibility, crisis of trade unions, future of work.</p> <p>Usually offered in even years.</p> <p>Mr. Sirianni</p>
Sociology 219b. Advanced Topics in Political Sociology: Social Movements	<p>This year's topic will be social movements. Different contemporary approaches to the study of social movements will be reviewed, including collective behavior, rational action, resource mobilization and European "new social movements" theory. Empirical monographs about specific social movements will be considered.</p> <p>Usually offered in odd years.</p> <p>Mr. Ross</p>		
Sociology 220b. Seminar on the Sociology of Politics	<p>A survey of the contemporary movements in the sociology of politics of advanced societies. Topics to be discussed will include pluralist and group theories, elite theory, behavioralism and voting studies, the theory of the state debate (neo-Marxist and neo-liberal variants), the "new institutionalism," theories of social movements, rational choice modeling.</p> <p>Usually offered in even years.</p> <p>Mr. Ross</p>	Sociology 224b. Class and Stratification	<p>This course confronts the "mainstream" tradition of stratification research with Marxist class theory, placing particular emphasis on the research methodologies implied by and characteristic of these contending analytic frameworks. Students will be expected to engage in small, semester-long research projects informed by the theoretical and methodological issues that emerge from the readings and discussions.</p> <p>Usually offered in even years.</p> <p>Mr. Macy</p>
Sociology 221a. Advanced Topics in Sociological Theory: French Social Thought Since 1945	<p>French social theory since 1945 will be reviewed in the context of French social history and the sociology of intellectuals. Reading will include Existentialists-Marxists (Sartre, Merleau-Ponty), Structuralists (Levi-Strauss, Althusser, Poulantzas), Liberals (Aron, Crozier, Boudon and others), and post-1968 figures such as Michel Foucault, Alain Touraine and Pierre Bourdieu.</p> <p>Usually offered every third year.</p> <p>Mr. Ross</p>	Sociology 225a. Deviance: Theories and Research	<p>Usually offered every fourth year.</p> <p>Staff</p>
Sociology 221b. Topics in the Sociology of Religion	<p>Usually offered every fourth year.</p> <p>Staff</p>	Sociology 226a. Theories in Social Psychology	<p>An examination of some major theorists of self and society, social interaction and interpersonal relations. Theorists considered will include Cooley, Mead, Sullivan, Goffman, Buber and others.</p> <p>Usually offered in even years.</p> <p>Mr. Schwartz</p>
		Sociology 227b. Group Process Seminar	<p>Usually offered every third year.</p> <p>Staff</p>

Sociology 228a. Themes in Sociological Theory — Phenomenology and Sociology: Alfred Schutz	An introduction to phenomenology and its significance for sociology by an intensive study of selective writings of Alfred Schutz. Usually offered every fourth year. Mr. Wolff		Sociology 290a. Pro-Seminar	A seminar meeting once a week in which faculty members introduce their interests and research. Required of all first year graduate students. Other graduate students are welcome to attend. Usually offered every year. Mr. Ross	
Sociology 228b. Themes in Sociological Theory	Usually offered every third year. Staff		Sociology 401-425d. Dissertation Research	Independent research for the Ph.D. degree. 401d. Mr. Bittner 417d. Ms. Fields 404d. Mr. Fellman 418d. Ms. Hayim 405d. Mr. Fisher 420d. Ms. Reinharz 410d. Mr. Ross 423d. Mr. Conrad 411d. Mr. Schwartz 424d. Mr. Sirianni 412d. Mr. Stein 425d. Ms. Alexander 415d. Mr. Zola	
Sociology 230-257a and b. Readings in Sociological Literature	Usually offered every year. 230a and b. 243a and b. Mr. Bittner Mr. Zola 233a and b. 245a and b. Mr. Fellman Mr. Conrad 234a and b. 246a and b. Mr. Fisher Ms. Hayim 238a and b. 249a and b. Mr. Ross Ms. Reinharz 239a and b. 253a and b. Mr. Schwartz Ms. Alexander 240a and b. 256a and b. Mr. Stein Mr. Macy 242a and b. 257a and b. Mr. Wolff Mr. Sirianni				

Spanish

See Joint Program of Literary Studies

Theater Arts

Objectives

The Master of Fine Arts Program in theater arts is designed both to train and to educate — to develop skilled craftsmen of knowledge and judgment about the arts.

Professionally oriented training is offered in three theatrical disciplines: **Acting, Design and Dramatic Writing.**

The production program provides extensive practical experience for all students on and behind the stages of the three Spingold theaters, where the actors act, the designers design and construct and the playwrights have the opportunity to see their accepted plays produced.

Admission

The general requirements for admission to the graduate school, given in an earlier section of this catalog, apply to candidates for admission to this area of study. Please note, the GRE is not required for theater arts admission. Students apply for admission to one of the three disciplines and, in addition to the standard application procedures, acting applicants are seen in an audition/interview, design applicants attend an interview with portfolio evaluation and dramatic writing applicants submit one or more original play scripts for evaluation.

Acting and design auditions/evaluations are held at Brandeis and at other locations around the country. Information about these auditions/evaluations will be furnished by the department **after** applications have been received; materials from dramatic writing applicants will be reviewed **after** applications have been received.

Admission is granted for one academic year at a time. Students in residence must make formal application for readmission to the graduate school by March 1 for the following year.

Faculty

Adjunct Professor
Michael Murray,
Director of the
Theater Arts Program:
Directing.

Professor
James H. Clay:
Directing. Theater
history.

Adjunct Professor
Karl Eigsti:
Scenic design.

Professor
Martin Halpern:
Playwriting and
dramatic literature.

Adjunct Professor
John Bush Jones:
Dramatic theory,
literature and
criticism.

Professor
**Theodore L.
Kazanoff:**
Acting and directing.

Adjunct Professor
Patricia Zipprodt:
Costume design.

Associate Professor
Robert O. Moody:
Scene painting.

Associate Professor
**Maureen Heneghan
Tripp:**
Costume design.

Lecturer
William Anderson:
Lighting design.

Lecturer
Robin Wiseman:
Costume rendering.

Artist-in-Residence
Alexander L. Davis:
Voice and speech.

Artist-in-Residence
Susan Dibble:
Movement for the
actor.

Artist-in-Residence
Daniel Gidron:
Acting and directing.

Artist-in-Residence
Barbara A. Harris:
Stage management.

Artist-in-Residence
Denise Loewenguth:
Costuming.

Artist-in-Residence
Annie Loui:
Movement. Style.

Artist-in-Residence
Leslie Taylor:
Scenic techniques.

Degree Requirements

Master of Fine Arts

Residence Requirements. Acting: three years. Design: three years. Dramatic writing: two years. Dramatic writing with Certification: three years.

Design

Actors are required to serve on a crew for one major production each year (about 60 hours); normally this crew may not be for a play in which the student is also performing. Students are expected to help on crew whenever they have time, regardless of formal credit.

All graduate design students will have the opportunity to be involved in production work as design assistants or designers during the course of the three-year program. This program is progressive from year one to year three beginning with basic design and crew work and ending with total production design responsibilities. Production assignments are given each year based on the design students' ability and desire, and consultation with the faculty.

Dramatic Writing

Dramatic writing students are required to serve on two crews each year (about 120 hours). They are also required to participate in the preparation of any studio, workshop or major production of their plays mounted during the time they are in residence, and this counts as one crew. In rare instances, acting in a major production may count as one crew.

Programs of Study

Acting

The acting faculty provides close supervision of class and performance work for first-year actors; second- and third-year actors are the core of the acting company for mainstage and other production activities.

First-year actors are not cast in major productions until the second semester. Second- and third-year actors are required to audition for and play as cast in all major productions, unless excused by the chairman after consultation with the director.

Courses of Instruction

Required Courses for First-Year Actors

Theater Arts 201d. Seminar in Dramatic Theory, Method, Literature	Usually offered every year. Mr. Jones
Theater Arts 203d. Advanced Acting Studies I	Usually offered every year. Mr. Kazanoff
Theater Arts 205d. Speech I	Includes regular classes and tutorials. Usually offered every year. Mr. Davis
Theater Arts 207d. Movement for the Actor I	Includes regular stage combat classes and tutorials. Usually offered every year. Ms. Dibble
Theater Arts 209d. Voice Studies for the Actor I	Includes regular classes in vocal production, Alexander Technique and tutorials. Usually offered every year. Staff
Theater Arts 225d. Production Laboratory I	Usually offered every year. Staff

Theater Arts 233d. Singing I	Group lessons and tutorials. Usually offered every year. Ms. Kuzma
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Required Courses for Second-Year Actors

Theater Arts 204d. Advanced Acting Studies II	Continuing work in exploration of process that integrates self and text through study of Laban, Chekov and techniques that help actor objectify emotion. Scoring now includes through-line and overall objective. Scenes from all of dramatic literature. Usually offered every year. Messrs. Gidron, Kazanoff and Murray
Theater Arts 206d. Speech II	Includes regular classes and tutorials. Usually offered every year. Mr. Davis
Theater Arts 208d. Movement for the Actor II	Includes regular classes in stage combat, tap and other movement styles when available and tutorials. Usually offered every year. Ms. Dibble

Theater Arts 210d.
Voice Studies for the Actor II

Includes regular classes in vocal production, Alexander Technique and tutorials.

Usually offered every year.

Staff

Theater Arts 226d.
Production Laboratory II

Usually offered every year.

Staff

Theater Arts 234d.
Singing II

Group lessons and tutorials.

Usually offered every year.

Ms. Kuzma

Required Courses for Third-Year Actors

Theater Arts 301d.
Advanced Acting Studies III

Includes a weekly scene workshop.

Usually offered every year.

Staff

Theater Arts 302d.
Movement for the Actor III

Includes regular classes in stage combat, tap and other movement styles and tutorials.

Usually offered every year.

Ms. Dibble

Theater Arts 303d.
Voice Studies for the Actor III

Includes regular classes in vocal production, Alexander Technique and tutorials.

Usually offered every year.

Staff

Theater Arts 304d.
Rehearsal and Performance

Usually offered every year.

Acting Faculty

Theater Arts 305d.
Speech III

Includes regular classes and tutorials.

Usually offered every year.

Mr. Davis

Theater Arts 325d.
Production Laboratory III

Staff

Theater Arts 334d.
Singing III

Usually offered every year.

Ms. Kuzma

Required Courses for First-Year Designers

Theater Arts 201d.
Seminar in Dramatic Theory, Method, Literature

Usually offered every year.

Mr. Jones

Theater Arts 211d.
Scenic Design I

Usually offered every year.

Mr. Eigsti and Ms. Taylor

Theater Arts 214d.
Costume Pattern Drafting

Laboratory fee to be arranged.

Usually offered every year.

Ms. Loewenguth

Theater Arts 217d.
Costume Design

Usually offered every year.

Ms. Zipprodt

Theater Arts 219d.
Lighting Design and Mechanics I

Laboratory fee to be arranged.

Usually offered every year.

Mr. Anderson

Theater Arts 221d.
Costume Studies, Basic Drawing and Perspective Drawing

Usually offered every year.

Mr. Wiseman

Theater Arts 222d.
Drafting

Laboratory fee to be arranged.

Usually offered every year.

Staff

Theater Arts 225d.
Production Laboratory I

Usually offered every year.

Staff

Theater Arts 230d.
Life Drawing I

Laboratory fee determined by enrollment.

Usually offered every year.

Mr. Moody

Theater Arts 237d.
Design Production I

Design students assist in the areas of production: scenic arts, props, hair and make-up, millinery, costume and lighting.

Usually offered every year.

Design Faculty

Required Courses for Second-Year Designers

Theater Arts 212d. Scenic Design II	Usually offered every year. Mr. Eigsti
Theater Arts 218d. Costume Design II	Usually offered every year. Ms. Zipprodt
Theater Arts 220d. Lighting Design II	Laboratory fee to be arranged. Usually offered every year. Mr. Anderson
Theater Arts 223d. Scene Painting I	Usually offered every year. Mr. Moody
Theater Arts 224d. Stage Mechanics	Laboratory fee to be arranged. Usually offered every year. Staff
Theater Arts 226d. Production Laboratory II	Usually offered every year. Staff
Theater Arts 227d. Sketching and Rendering I	Usually offered every year.
Section A:	Costume Rendering Ms. Newhall
Section B:	Set Rendering Mr. Moody
Theater Arts 228d. Scenic Crafts	Laboratory fee to be arranged. Usually offered every year. Mr. Moody
Theater Arts 232d. Costume Construction	Laboratory fee to be arranged. Usually offered every year. Ms. Loewenguth
Theater Arts 235d. History of Costume and Decorative Arts	Usually offered every year. Ms. Tripp
Theater Arts 238d. Design Production II	Design students will serve as assistants to the designers in the areas of scenery, costumes and lighting. Usually offered every year. Design Faculty

Required Courses for Third-Year Designers

Theater Arts 239d. Design Production III	Design students will be assigned shows to design in their specialized field of interest: scenery, costumes and lighting. In addition, assignments in scene painting, mask making, props and specialized costume accessories will also be given to design students who have achieved an advanced craft skills level in the course of the three year program. Usually offered every year. Design Faculty
Theater Arts 242d. Scenic Design III	Usually offered every year. Mr. Eigsti
Theater Arts 243d. Costume Design III	Usually offered every year. Staff
Theater Arts 244d. Costume Rendering II	Usually offered every year. Ms. Newhall
Theater Arts 245d. Draping/Costume Crafts	Laboratory fee to be arranged. Usually offered every year. Ms. Loewenguth
Theater Arts 246d. Lighting Design III	Usually offered every year. Mr. Anderson
Theater Arts 310b. Thesis Projects	The graduate design thesis is a full-scale project that grows out of the periodic portfolio reviews. It may be either a realized or nonrealized project. Design Faculty
Theater Arts 325d. Production Laboratory III	Usually offered every year. Staff

Required Courses for First-Year Playwrights

Theater Arts 200e. Seminar in Scene Writing and Analysis	Required for first-year playwriting students. Open to second- and third-year students as a noncredit elective. Usually offered every year. Mr. Halpern
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Theater Arts 201d. Seminar in Dramatic Theory, Method, Literature	Usually offered every year. Mr. Jones	In addition, one full-year elective course. Students may take the following Theater Arts courses as electives as well as approved courses in other departments.
Theater Arts 215e. Workshop in Dramatic Writing I	A double-credit course. Usually offered every year. Mr. Halpern	Theater Arts 101c. Stage Management Usually offered every year. Ms. Harris
Theater Arts 225d. Production Laboratory I	Usually offered every year. Staff	Theater Arts 190a. A Study of Acting Theory and Method as They Relate to Twentieth-Century Theater Usually offered in even years. Mr. Kazanoff
In addition, one full-year elective course.		Theater Arts 190b. A Study of Directing Theory and Method as They Relate to Twentieth-Century Theater Usually offered in even years. Mr. Kazanoff
Required Courses for Second-Year Playwrights		Theater Arts 213d. Directing Usually offered every year. Mr. Murray
Theater Arts 202d. Seminar in Dramatic Structure	Usually offered every year. Mr. Jones	Theater Arts 240d. Acting for Designers and Playwrights Acting course for second- and third-year designers and playwrights. Usually offered every year. Mr. Kazanoff
Theater Arts 216e. Workshop in Dramatic Writing II	A double-credit course. Usually offered every year. Mr. Halpern	Theater Arts 250b. Career Workshop Open only to third-year actors to help prepare them for the practical demands of an acting career. Usually offered every year. Staff
Theater Arts 226d. Production Laboratory II	Usually offered every year. Staff	
In addition, one full-year elective course.		
Required Courses for Third-Year Playwrights		
Theater Arts 300d. Independent Study	Usually offered every year. Staff	
Theater Arts 315e. Workshop in Dramatic Writing III	A double-credit course. Usually offered every year. Mr. Halpern	
Theater Arts 325d. Production Laboratory III	Usually offered every year. Staff	

University Organization

Board of Trustees

Under Massachusetts law, the 50-member Board of Trustees is the governing body of the University. There are also four faculty representatives and three student representatives to the board who participate in Board meetings and have votes on the several committees. The chairman of the Fellows, the president of the National Women's Committee and the president of the Alumni Association serve *ex-officio*. Alumni elect annually an Alumni Term Trustee who serves as full voting trustee for a five-year term.

The President

The President, the chief executive officer of the University, is appointed by the Board of Trustees and is responsible for all university activities.

Chancellor Emeritus

Chancellor Emeritus of the University is an honorary title held by Brandeis' Founding President Abram L. Sachar.

University Fellows

University Fellows comprise about 400 national leaders from a broad base of business, educational and public life who lend counsel, expertise and support to University development and planning programs.

The President's Council

President's Councilors are leading men and women throughout the country whose skills and experience are placed at the disposal of the Brandeis president in areas of their special competence.

The Provost and Deans

The Provost and Dean of the Faculty, the chief academic officer of the University, supervises academic policy, undergraduate and graduate curricula, library services, the faculty and its departments of instruction.

The Dean of the College of Arts and Sciences assumes responsibility for many areas affecting the academic lives of undergraduates, including curriculum development, advisory services and the academic progress of students.

The Dean of the Graduate School of Arts and Sciences oversees the individualized programs of graduate study for scholars, scientists and artists in 20 disciplines.

The Dean of the Florence Heller Graduate School for Advanced Studies in Social Welfare oversees the academic activities of the University's first and only professional school and its work in such areas as health, aging, income and employment and minorities.

The Dean of Student Affairs is responsible for many areas of student life, including student activities, residence life, career planning and placement, health service and athletics.

The Faculty Senate

The Faculty Senate, the elected representative body of the faculty, discusses such issues as academic freedom and responsibility, university policy, appointments, tenure, dismissal and salaries.

The Vice Presidents

The Executive Vice President for Finance and Administration oversees Brandeis' complete financial and administrative support operations. The major responsibilities include budgeting and planning, capital programs, endowment and investment management, computer services, telecommunications, plant operations, employee relations, security, materials management and community relations. The Executive Vice President also serves as principal liaison with the Budget and Finance, Investment and Facilities committees of the Board of Trustees.

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The National Women's Committee, "the largest friends of a library association" in the country with approximately 60,000 members, has been a partner with the University since 1948. The executive director and national office personnel are responsible for working with the organization's volunteer leadership to develop projects, implement programs and service more than 110 National Women's Committee chapters throughout the United States. This volunteer organization offers its membership a wide range of educational activities. These include unique study group programs with syllabi provided by Brandeis faculty; "University on Wheels" local adult education seminars; and special lectures by University speakers. Members serve as ambassadors of good will for the University in their local communities. The primary mission of the Women's Committee is to support the Brandeis University libraries. The organization supports all aspects of the libraries' operation, including the acquisition of books and research journals, restoration and preservation, computerized reference system, Library Work Scholars and rare acquisitions. Since the organization's founding 41 years ago by eight women in Boston, the National Women's Committee has contributed approximately \$34 million in support of the Brandeis libraries.

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Daniel Gidron Artist-in-Residence (Theater Arts) <i>M.F.A., Brandeis University '65</i>	Eugene P. Gross Edward and Gertrude Swartz Professor of Theoretical Physics <i>Ph.D., Princeton University</i>	Barbara A. Harris Artist-in-Residence (Theater Arts) <i>M.F.A., Yale University</i>	James B. Hendrickson Professor of Chemistry <i>Ph.D., Harvard University</i>	Mark L. Hulliung Professor of Politics <i>Ph.D., Harvard University</i>	Gary H. Jefferson* Assistant Professor of Economics <i>Ph.D., Yale University</i>
Michael T. Gilmore Professor of English <i>Ph.D., Harvard University</i>	Allen R. Grossman** Paul E. Prosswimmer Professor of Poetry and General Education <i>Ph.D., Brandeis University '60</i>	Michael Harris*** Professor of Mathematics <i>Ph.D., Harvard University</i>	Maurice Hershenson George and Frances Levin Associate Professor of Psychology <i>Ph.D., Yale University</i>	Robert C. Hunt*** Associate Professor of Anthropology <i>Ph.D., Northwestern University</i>	William P. Jencks Gyula and Katica Tauber Professor of Biochemistry and Molecular Pharmacodynamics <i>M.D., Harvard University</i>
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Ruth Gollan Adjunct Associate Professor of Near Eastern and Judaic Studies and Director, Hebrew and Oriental Language Programs <i>Ph.D., Boston College</i>	Michal Grover Lecturer in Hebrew <i>B.A., Hebrew University</i>	Sara Hascal Lecturer in Hebrew <i>M.A., Hebrew College</i>	Christine L. Heyrman Associate Professor of History <i>Ph.D., Yale University</i>	Kiyoshi Igusa Professor of Mathematics <i>Ph.D., Princeton University</i>	Leon A. Jick*** Helen and Irving Schneider Professor of American Jewish Studies <i>Ph.D., Columbia University</i>
Eugene Goodheart Edytha Macy Gross Professor of Humanities and Director, Humanities Center <i>Ph.D., Columbia University</i>	James E. Haber Professor of Biology and Rosenstiel Basic Medical Sciences Research Center <i>Ph.D., University of California, Berkeley</i>	Michael Haselkorn Lecturer in Economics <i>Ph.D., University of Chicago</i>	Timothy J. Hickey Assistant Professor of Computer Science <i>Ph.D., University of Chicago</i>	Judith T. Irvine Associate Professor of Anthropology <i>Ph.D., University of Pennsylvania</i>	William A. Johnson Albert V. Danielsen Professor of Philosophy and Christian Thought <i>Ph.D., Columbia University</i>
Paul Gootenberg Assistant Professor of Latin American History <i>Ph.D., University of Chicago</i>	Jane Hale Assistant Professor of French and Comparative Literature and Dana Faculty Fellow <i>Ph.D., Stanford University</i>	Clement Hawes Visiting Assistant Professor of English and American Literature <i>Ph.D., Yale University (Albion College)</i>	Donald Hindley** Professor of Politics <i>Ph.D., Australian National University</i>	Rachel Israeli Lecturer in Hebrew <i>B.A., Tel Aviv University</i>	Patricia A. Johnston Associate Professor of Classical Studies <i>Ph.D., University of California, Berkeley</i>
	K.C. Hayes Professor of Biology and Director, Foster Biomedical Research Laboratories <i>Ph.D., University of Connecticut</i>	Eli Hirsch* Professor of Philosophy <i>Ph.D., New York University</i>	Thomas C. Holloucher, Jr.** Professor of Biochemistry <i>Ph.D., University of Rochester</i>		On leave Fall Term 1989-90* On leave Spring Term 1989-90** On leave 1989-90***

John Bush Jones Adjunct Professor of Theater Arts <i>Ph.D., Northwestern University</i>	Allan R. Keiler* Professor of Music <i>Ph.D., Harvard University</i>	David Kopp Lecturer in Music <i>M.A., State University of New York, Stony Brook</i>	Harold I. Levine Professor of Mathematics <i>Ph.D., University of Chicago</i>	Karol Lipski Lecturer in German <i>Ph.D., Brandeis University '88</i>	Joan M. Maling* Professor of Linguistics <i>Ph.D., Massachusetts Institute of Technology</i>
Peter C. Jordan Professor of Chemistry <i>Ph.D., Yale University</i>	Alice A. Kelikian Associate Professor of History <i>D.Phil., Oxford University</i>	Celeste Kostopulos- Cooperman Adjunct Assistant Professor of Spanish <i>Ph.D., Brown University</i>	Jerome P. Levine Professor of Mathematics <i>Ph.D., Princeton University</i>	John E. Lisman* Professor of Biology <i>Ph.D., Massachusetts Institute of Technology</i>	Lizbeth Marano Saltzman Visiting Artist (Fine Arts)
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Robbie Pfeufer Kahn Lecturer in American Studies <i>Ph.D., Brandeis University '85</i>	David Kelley Lecturer in Philosophy <i>Ph.D., Princeton University</i>	Kenneth Kustin Professor of Chemistry <i>Ph.D., University of Minnesota</i>	Norman E. Levine Associate Professor of Physical Education <i>B.S., Bates College</i>	Denise Loewenguth Artist-in-Residence (Theater Arts)	Virginia Marino Lecturer with rank of Assistant Professor of French <i>Ph.D., Yale University</i>
Robert Kallet-Marx Lecturer with rank of Assistant Professor of Classical Studies <i>Ph.D., University of California, Berkeley</i>	Katherine Kiel Lecturer in Economics <i>M.A., University of California, San Diego</i>	Margie Lachman Associate Professor of Psychology <i>Ph.D., Pennsylvania State University</i>	Alan Levitan Associate Professor of English <i>Ph.D., Princeton University</i>	Susan Lovett Assistant Professor of Biology and Rosenstiel Basic Medical Sciences Research Center <i>Ph.D., University of California, Berkeley</i>	Robert L. Marshall Louis, Frances and Jeffrey Sachar Professor of Music <i>Ph.D., Princeton University</i>
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- Brinkley Messick**
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- David W. Murray**
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- Hugh N. Pendleton****
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- Peter Rathjens**
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- Benjamin C. I. Ravid**
Jennie and Mayer Weisman Professor of Jewish History
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- Mary Ruth Ray**
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- On leave Fall Term 1989-90*
On leave Spring Term 1989-90**
On leave 1989-90***

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Bernard Reisman Professor of American Jewish Communal Studies and Director, Hornstein Program <i>Ph.D., Brandeis University, Heller School '70</i>	Michael Roshbash Professor of Biology and Howard Hughes Medical Institute Investigator <i>Ph.D., Massachusetts Institute of Technology</i>	Jerry Samet*** Assistant Professor of Philosophy <i>Ph.D., City University of New York</i>	Silvan S. Schweber Professor of Physics and Richard Koret Professor in the History of Ideas and Director, Dibner Program in History of Science <i>Ph.D., Princeton University</i>	Lawrence Siegel Artist-in-Residence (Music) <i>Ph.D., Brandeis University '85</i>	Maurice R. Stein Jacob S. Potofsky Professor of Sociology <i>Ph.D., Columbia University</i>
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Yardit Ringvald Lecturer in Hebrew <i>M.A., Hebrew College</i>	George W. Ross Hillquit Professor of Labor and Social Thought <i>Ph.D., Harvard University</i>	Jerome A. Schiff Abraham and Etta Goodman Professor of Biology <i>Ph.D., University of Pennsylvania</i>	Ranjan Sen Assistant Professor of Biology and Rosenstiel Basic Medical Sciences Research Center <i>Ph.D., Columbia University</i>	Carmen Sirianni*** Associate Professor of Sociology <i>Ph.D., State University of New York, Binghamton</i>	Robert Stern Visiting Professor of Economics <i>Ph.D., Columbia University (University of Michigan)</i>
	Howard J. Schnitzer Professor of Physics <i>Ph.D., University of Rochester</i>	John E. Schrecker Associate Professor of History <i>Ph.D., Harvard University</i>	Alan Shapiro Fannie Hurst Poet-in-Residence (English) <i>B.A., Brandeis University '74</i>	Marshall Sklare Klutznick Family Professor of Contemporary Jewish Studies and Sociology <i>Ph.D., Columbia University</i>	Lawrence Sternberg Adjunct Assistant Professor, Hornstein Program <i>M.A., Brandeis University '80</i>
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Peter Swiggart Professor of English <i>Ph.D., Yale University</i>	Gary A. Tobin Associate Professor of Jewish Community Research and Planning and Director, Center for Modern Jewish Studies (Lown School) <i>Ph.D., University of California, Berkeley</i>	Kari Vilonen Assistant Professor of Mathematics <i>Ph.D., Brown University</i>	Robert Weiner* Assistant Professor of Economics <i>Ph.D., Harvard University</i>	David Wong Associate Professor of Philosophy <i>Ph.D., Princeton University</i>	Irving K. Zola Professor of Sociology <i>Ph.D., Harvard University</i>
Andrew G. Szent- Gyorgyi Professor of Biology <i>M.D., University of Budapest</i>	Cheryl Walker Lecturer in Classical Studies <i>Ph.D., University of North Carolina</i>	Richard Weissberg Fannie Hurst Visiting Professor of English <i>Ph.D., Cornell University (Yeshiva University)</i>	Hermann F. Wellenstein Associate Professor of Physics <i>Ph.D., University of Texas</i>	Yehudi Wyner Professor of Composition <i>M.Mus., Yale University</i>	James A. Zoltz Lecturer in Physical Education <i>M.Ed., Springfield College</i>
Robert Szulkin Professor of Russian <i>Ph.D., Harvard University</i>	Ian A. Todd Professor of Archeology in Classical Studies <i>Ph.D., University of Birmingham</i>	Cheryl Walker Lecturer in Classical Studies <i>Ph.D., University of North Carolina</i>	Pieter C. Wensink Professor of Biochemistry and Rosenstiel Basic Medical Sciences Research Center <i>Ph.D., The Johns Hopkins University</i>	Nobuko Yamasaki Lecturer in Japanese <i>M.A., Tokyo University</i>	Edgar B. Zurif*** Professor of Cognitive Science <i>Ph.D., University of Waterloo</i>
James T. Todd Professor of Psychology <i>Ph.D., University of Connecticut</i>				Luis E. Yglesias Associate Professor of Spanish and Comparative Literature <i>Ph.D., Harvard University</i>	On leave Fall Term 1989-90* On leave Spring Term 1989-90** On leave 1989-90***

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Christine E. Bishop
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and Senior Research
Associate
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Gerald Bush
Lecturer and Senior
Research Associate
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